

# INDEX

- ABBE (Prof. Cleveland), the Aims and Methods of Meteorological Work, especially as conducted by National and State Weather Services, 448
- Abbot (C. G.), the Wastefulness of Artificial Lights, 546; a Compound Prism of Uniform Dispersion, 597
- Abegg (Prof.), Use of Violuric Acid in Calorimetric Investigations, 402
- Abelous (E.), Transformation of Nitrobenzene into Aniline by Horse-kidney Ferment, 407
- Abelous (J.), Co-existence of Reducing and Oxidising Diastase in Animal Organs, 192.
- Abney (Sir W. de W.), Monochromatic Vision, 433
- Abraham (M.), Researches on Kerr's Phenomenon, 112
- Abraham (H.), Time of Establishing Electric Spark, 360; Instantaneous Disappearance of Rotatory Polarisation, 435
- Acoustics: Note on Distances to which Explosions are Felt and Heard, Dr. Charles Davison, 91; Barisal Guns, Henry S. Schurr, 127; Barisal Guns and Earthquakes, Prof. A. Issel, 60; Highest Audible and Inaudible Notes, R. König, 190; Mechanism of Hearing, Firmin Larroque, 311; Earthquake Sounds, Dr. C. Davison, 329; Movements of Expired Air during Formation of Speed Sounds, E. Gellé, 384; Photographs of Sound Waves, Prof. R. W. Wood, 433; New Method of Measuring Acuteness of Hearing for Intensity of Sound, E. Toulouse and N. Vachide, 436; an Interesting Case of Resonance, Kenneth McMurtrie, 445; the Acoustic Analysis of the Vowels from the Phonographic Record, Prof. Louis Bevier, 467; Syntony, P. E. Shaw, 529; Electrical Micrometer, P. E. Shaw, 529
- Addenbrooke (Mr.), Model illustrating Flow-actions of Electric Current, 23
- Adie (R. H.), Reaction between Sulphuric Acid and Potassium Ferrocyanide, 190; Sulphate of Bismuth, 190; Volumetric Estimation of Potassium, 405
- Adrian (M.), Colouring Matter of Digitalis, 144
- Aération, Milk-preservation by, Dr. F. H. Bowman, 507
- Aerolites, H. L. Ward, 190; W. M. Foote, 190
- Aeronautics: Death and Obituary Notice of H. T. Coxwell, 257; Danilewsky's Divisible Balloon, 372; Recent International Balloon Ascents, Dr. H. Hergesell, 572; Recent Exploration in Upper Air and its bearing on Theory of Cyclones, H. H. Clayton, 611; Aeronaut Poisoned by Hydrogen Arsenide, 618
- Aflalo (F. G.), Types of British Animals, 77; the Necessity for Legislative Regulation of Sea Angling, 235
- Africa: the Situation of Ophir, Dr. Carl Peters, 203; the African Horse Sickness, Dr. R. Wallace, 235; the Orange River Ground Moraine near Prieska, Messrs. Rogers and Schwarz, 240; Mineral Wealth of Zoutpansberg, D. S. S. Steuart, 281; Journals and Papers of Chauncy Maples, D.D., late Bishop of Likoma, Lake Nyasa, 294; In Dwarf Land and Cannibal Country, a Record of Travel and Discovery in Central Africa, A. B. Lloyd, 314; Geology of Mount Kenya, Dr. J. W. Gregory, 382; Elaeolite-syenite and Fouchites of British South African Coast, Dr. J. W. Gregory, 382; Soils of South-west Cape Colony, C. F. Juritz, 436; a Flesiosaurian from Uitenhage, Cape Colony, Mr. Schwarz, 544; Remarkable Huilstorm in Cape Colony, O. D. Deacon, 594; Mammals of Mount Kenya, O. Thomas, 458; the Fauna of South Africa. Birds, A. C. Stark, 516; the Birds of Africa, comprising all the species which occur in the Ethiopian Region, G. F. Shelley, 516; Flint Implements from Nile Valley, 597; the Protection of Wild Animals, 616
- Agamennone (Dr. G.), Balikesri Earthquake of September 14, 1896, 500
- Agassiz (Prof. Alexander), Results of Recent Soundings in the Pacific, 211; the Pacific Corals, 432; Trawling in Pacific, 529
- Agriculture: the Utility of the Sulphate of Ammonia in Agriculture, James Muir, 101; Progress of Agricultural Chemistry, Prof. Maercker, 116; the Wheat Problem, Sir William Crookes, F.R.S.; Sir R. Giffen, K.C.B., F.R.S., 169; Death and Obituary Notice of Dr. J. F. Hodges, 184; Scientific Weather Prediction for Agricultural Purposes, Dr. van Webber, 185; the "Wilt" Disease of Cotton, &c., E. F. Smith, 186; the Eradication by Spraying of Charlock and Runch, J. R. Campbell, 186; Eradication of Charlock by Spraying, Prof. W. Somerville, 619; the Use of Sulphate of Copper, Dr. J. A. Voelcker, 281; Agricultural Education, 332; the West Indian Agricultural Conference, Prof. J. P. d'Albuquerque, 392; Rice Culture in U.S.A., Dr. S. A. Knapp, 401; Nitragin and the Nodules of Leguminous Plants, Maria Dawson, 405; Soils of South-west Cape Colony, C. F. Juritz, 436; Death and Obituary Notice of L. J. McCormick, 476; the Bacteriology of the Soil, Thos. T. Watson, 515; Nitragin ineffective in increasing Clover Crop, 519; the Work of the Research Association, 519; the Price of Wheat at Haddington, 1627-1897, R. C. Mossman, 519; Australian Experimental Farms, 528; the Locust Plague in New South Wales, W. W. Froggart, 620
- Agumi, Gli, Prof. Antonio Aloï, 294
- Ahrens (C. D.), Large Nicol Prisms, 31
- Aitken (John, F.R.S.), Atmospheric Electricity, 514; Dynamics of Cyclones, 531
- Air, the Resistance of the, Prof. G. H. Bryan, F.R.S., 107, 248
- Air, Liquid, as Anæsthetic, Dr. A. C. White, 258; the Distillation of Liquid Air, E. C. C. Baly, 457; Its Uses for Researches at Low Temperatures, Prof. Ramsay, 458
- Air Movement at Simla and in the Western Himalayas, 380
- Alaska and the Klondike, Angelo Heilprin, 122
- Albrecht (Prof. Th.), Variation of Latitude, 574
- Albuquerque (Prof. J. P. d'), the West Indian Agricultural Conference, 392
- Alby (M.), on the Construction and Erection of the Alexander III. Bridge over the Seine in Paris, 21
- Alcock (A.), an Account of the Deep-sea Brachyura, being Systematic Reports upon the Materials collected by the Royal Indian Marine Survey Ship *Investigator*, 291
- Alcoholism, Acute, N. Gréhan, 95
- Ale, Birch, Dr. W. C. MacLagan, 286
- Alembert (D'), Abhandlung der Dynamik, 390
- Alexandria, Hero of, W. Schmidt, 202
- Algebra, Elementary, C. H. French and G. Osborn, 200
- Algeria, Petroleum in, M. Neuburger, 618
- Algol Type, Variable Stars of the, H. C. Wilson, 521
- Algol Variable, Light Curve of Ceraski's First, 355
- Algol Variable in Cygnus, New, 17
- Algol Variable in Cygnus, Ceraski's Second New, 355; Prof. E. C. Pickering, 454
- Alkali Industry, Impending Changes in the General Development of Industry, and particularly in the, Prof. G. Lunge, 92
- Allbutt (Prof. T. C., F.R.S.), a System of Medicine by many Writers; Edited by, 584
- Allen (E. J.), the Stockholm Fisheries Conference, 54, 227; Report of the Marine Biologist for the Year 1898; Cape of Good Hope Department of Agriculture, 562

- Allen (Grant), Death and Obituary Notice of, 13  
Alloys, Gold Aluminium, C. T. Heycock, F.R.S., and F. H. Neville, F.R.S., 357  
Almanac, Nautical, Day Numbers of, 208.  
Aloi (Prof. Antonio), Gli Agrumi, 294  
Aluminium Electric Cable, an, 399  
Ambronn (Dr. L.), Handbuch der Astronomischen Instrumentenkunde, 241  
Ameghino (Señor), Arrhinolemur, 372  
America: American Journal of Mathematics, 46, 457; American Journal of Science, 93, 190, 310, 432, 528, 626; Bulletin of American Mathematical Society, 93, 213, 404, 554, 577; Transactions of, 504; Marriages of the Deaf in America, Edward Allen Fay, Dr. Macleod Gearsley, 97; the North American Slime Moulds, Prof. T. H. MacBride, 173; Antiquity of Man in America, the Evidence as to Auriferous Gravel Man in California, W. H. Holmes, 206; Astronomical and Astrophysical Society of America, 208; a Glimpse at Guatemala, and some Notes on the Ancient Monuments of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, A. H. Keane, 292; American Higher Technical Education, Prof. F. W. Burstall, 299; the Birds of Eastern North America—Water Birds, C. B. Cory, 323; the Fishes of North and Middle America: a Descriptive Catalogue of the Species of Fish-like Vertebrates found in the Waters of North America, North of the Isthmus of Panama, David Starr Jordan and Barton Warren Evermann, 362; Fifteen Years' Sport and Life in the Hunting-grounds of Western America and British Columbia, W. A. Baillie-Grohman, 566; the Development of Astronomy in America, 574; North American Geology, 600  
Amphioxus, Notes on the Occurrence of, at Singapore, F. P. Bedford, 444  
Amsterdam Royal Academy of Sciences, 71, 167, 216, 407, 460, 580  
Anæsthetic, Liquid Air as, Dr. A. C. White, 258  
Anales del Museo Nacional de Buenos Aires, 46, 372  
Anatomy; Death of Émile Blanchard, 370  
Anderlini (F.), New Lines in Infra-red Spectrum of Argon, 235  
Anderson (Dr. T. D.), New Variable Star in Draco, 374; New Variable in Andromeda, 547; New Variables in Taurus and Cassiopeia, 621  
Andrews (C. W.), on the relation of Christmas Island to the Neighbouring Lands, 19; the Land Fauna of Christmas Island, 458  
Andrews (Thos., F.R.S.), Internal Stresses in Iron and Steel, 541; Wear of Steel Rails in Tunnels, 595  
Andromeda, New Variable in, Dr. T. D. Anderson, 547  
Andromedes, the, 61  
Angling, Sea, the Necessity for Legislative Regulation of, F. G. Aflalo, 235  
Animal and Vegetable Organisms, the Growth of, Charles Benedict Davenport, 218  
Animals of Britain and their Origin, Dr. R. F. Scharff, 341  
Animals, Experiments on, Stephen Paget, 512  
Animals, Types of British, F. G. Aflalo, 77  
Anlage and Rudiment, Prof. J. Mark Baldwin, 29  
Annalen der Physik: see Wiedemann's Annalen  
Antarctica: Account of the Cruise of Sir George Newnes' Yacht, *Southern Cross*, from Hobart to Cape Adare, Dr. H. R. Mill, 18; Account of the Voyage and Wintering of the Belgian Expedition in the Antarctic Ice-pack South-west of Cape Horn, H. Arctowski, 18; Further Work required in Antarctic Exploration, and Method of conducting it, M. Arctowski, 18; Physical and Chemical Work required for an Antarctic Expedition, J. Y. Buchanan, F.R.S., 18; Prof. Rücker, Major Darwin, Mr. George Murray, Dr. Koettlitz on Antarctic Exploration, 19; Dr. Gerhard Schott on the chief results of the Voyage of the *Valdivia*, 19; the Possibilities of Antarctic Exploration, Dr. F. A. Cook, 136; Geographical Results of Belgian Antarctic Expedition, Dr. F. A. Cook, 258; German Antarctic Expedition, Prof. Erich von Drygalski, 318; Tides along the Antarctic Continent, R. A. Harris, 490; Return of Borchgrevink's Antarctic Expedition, 544  
Anthrax, Serotherapy of, S. Arloing, 459  
Anthropology, Aboriginal Stonework in Porto Rico, Dr. O. T. Mason, 40; Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193; the Evidence as to Auriferous Gravel Man in California, W. H. Holmes, 206; Primitive Mathematics, L. Frobenius, 259; Prof. W. J. McGee, 259; Science and Faith, or Man as an Animal and Man as a Member of Society, with a Discussion of Animal Societies, Dr. Paul Topinard, 270; Journals and Papers of Chauncy Maples, D.D., late Bishop of Likoma, Lake Nyasa, 294; In Dwarf Land and Cannibal Country, a Record of Travel and Discovery in Central Africa, A. B. Lloyd, 314; Anthropological Institute, 434, 530, 578; the Races of Man: an Outline of Anthropology and Ethnography, J. Deniker, Prof. A. C. Haddon, F.R.S., 462; Stone Circles in Scotland, A. L. Lewis, 530; Ethnography of Solomon Islands, R. Parkinson, 546; Native Life and Customs in Sarawak, Prof. A. C. Haddon, 578; C. Hose, 578; see also British Association, Section H  
Anti-plague Inoculations, 550  
Antiquities of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, A. H. Keane, 292  
Antiquity of Man in America; the Evidence as to Auriferous Gravel Man in California, W. H. Holmes, 206  
Antivenene, Snake-bite Cured by Calmette's, Major S. J. Rennie, 85  
Ants: can they hear? Mr. Weld, 157  
Appell (M.), Equilibrium of Vessel carrying Liquid, 24  
Appleyard (Mr.), Fault-test for Electric Cable-cores, 334  
Archæology: the Reliquary and Illustrated Archaeologist, 6; Flint Implements, &c., from Egypt, Prof. Flinders Petrie, 95; Flint Implements from Nile Valley, 597; a Catalogue of the Cyprus Museum, with a Chronicle of Excavations undertaken since the British Occupation, and Introductory Notes on Cypriot Archaeology, John L. Myres and Max Ohnefalsch-Richter, 195; Pigmy Flints in Yorkshire, R. A. Gatty, 282; a Glimpse at Guatemala and some Notes on the Ancient Monuments of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, A. H. Keane, 292  
Arctica: Account of the Trial Trip of the great Russian Ice-breaker, *Yermak*, Admiral Makaroff, 17; Arctic Exploration, Walter Wellman, 17; the Scientific Results of the Polar Expedition, Dr. F. Nansen, 62; Mollusca of Kolguev and Franz Josef Land, J. C. Melvill and R. Standen, 143; Present State of Polar Ice, 422  
Arctowski (M.), Account of the Voyage and Wintering of the Belgian Expedition in the Antarctic Ice-pack South-west of Cape Horn, 18; Further Work Required in Antarctic Exploration and Method of Conducting it, 18  
Arey (Albert E.), Elementary Chemistry for High Schools and Academies, 442  
Argyll (Duke of), Death of, 616  
Arithmetical Exercises in Chemistry, Leonard Dobbin, 53  
Arithmétique, Exercices d', J. FitzPatrick et G. Chevrel, 314  
Arloing (S.), Serotherapy of Anthrax, 459  
Armour Plates, R. A. Hadfield, 301  
Arnaud (A.), New Method for Extraction from *Lanolinophila* Bark of Rubber, 360  
Arsenic in Animals, Armand Gautier, 166-7, 383  
Arsonval (M. d'), Apparatus for Decorating Front of Electricity Section of Paris Exhibition, 628  
Art Enamelling upon Metals, Theory and Practice of, Henry Cunyngame, 466  
Asia, Innermost, Ralph P. Cobbold, 495  
Astre (Ch.), New Compound of Antipyrin with Mercuric Chloride, 556  
Astronomy: on the Distribution of the various Chemical Groups of Stars, Sir Norman Lockyer, K.C.B., F.R.S., 8; Our Astronomical Column, 17, 41, 61, 87, 114, 137, 157, 187, 207, 236, 260, 283, 306, 330, 355, 374, 402, 424, 453, 479, 501, 521, 547, 574, 597, 621; Astronomical Occurrences in November, 17; in December, 137; in January 1900, 207; in February, 330; in March, 424; in April, 521; in May, 621; Holmes' Comet (1899d), 17, 41, 62, 87, 114, 137; Holmes' Comet (1899 II.), 236; Comet Giacobini (1899e), 17, 41, 87, 114, 137; M. Perrotin, 47; Comet Giacobini (1900a), 355, 402, 424; New Variable Star, 17; New Algol Variable in Cygnus, 17; Light Curve of Ceraski's First Algol Variable, 355; Second New Algol Variable in Cygnus, Madame Ceraski, 355; Prof. E. C. Pickering, 454; New Variable in Cygnus, 501; Elliptic Elements of the Variable Y Cygni, Prof. N. C. Dunér, 574; Spectrum of P. Cygni, Herr A. Belopolsky, 137; Variable Stars of the Algol Type, H. P. Wilson, 521; Next Week's Leonid Shower, Dr. G. Johnstone Stoney, F.R.S., Dr. A. M. W. Downing, F.R.S.,

28; the Leonids, 41, 374; W. F. Denning, 81; Dr. G. Johnstone Stoney, F.R.S., 82; the November Meteors, Dr. W. J. S. Lockyer, 132; Supposed Daylight Leonids, W. F. Denning, 152; Observations of the Leonids, M. Loewy, 119; M. J. Janssen, 119; J. Guillaume, 143; C. H. Trépied, 143; Harold Tarry, 143; S. de Glasenapp, 359; Leonid Meteor Showers, Thos. W. Kingsmill, 491; Contemporary Meteor-showers of the Leonid and Bielid Meteor-periods, Prof. A. S. Herschel, F.R.S., 222, 271; Long Focus Photographic Telescope, 41; Secular Variations of Venus, Prof. Eric Doolittle, 41; the Andromedes, 61; Occultation of Neptune, 62, 158, 453; Determination of Axis and Compression of Neptune, Prof. S. J. Brown, 621; the Heavens at a Glance, Arthur Mee, 62; the Meteors of Biela's Comet, E. C. Willis, 78; W. F. Denning, 78; Refraction Effect of Comet Swift (1899 I.), Prof. C. D. Perrine, 87; Predominance of Spiral Nebulae, Prof. J. E. Keeler, 87; Bulletin Astronomique, 87; Position of Perth Observatory, W. E. Cooke, 114; Spectroscopic Binaries,  $\alpha$  Aurigae, Prof. W. W. Campbell, 114;  $\alpha$  Ursae Minoris, Prof. W. W. Campbell, Prof. E. B. Frost, 114; Variations in the Spectrum of Orion Nebula, Prof. Scheiner, 114; Mercury and Jupiter as Morning Stars, 137; Mercury as a Naked Eye Object, W. F. Denning, 431; Photometric Observations of Mercury during Solar Eclipses, Dr. G. Müller, 574; Death and Obituary Notice of N. E. Green, 156; the Great Paris Telescope, Sir Norman Lockyer, K.C.B., F.R.S., 178; New Minor Planet (1899 E.Z.), 187; Change in Publication of the *Astronomische Nachrichten*, 187; Companion to the Observatory, 187; the Solar Parallax, Bouquet de la Grye, 192, 236; Orbit of Fifth Satellite of Jupiter, Prof. E. E. Barnard, 157; Partial Eclipse of the Moon, December 16, 158; Meridian of Universal Time, 158; the Wind during Eclipses of the Sun, John W. Evans, 200; A. L. Rotch, 589; the approaching Total Eclipse of the Sun, 201; the Eclipse Expedition at Viziquid, Sir Norman Lockyer, K.C.B., F.R.S., 229, 249; Solar Eclipses in the 20th Century, M. Camille Flammarion, 548; Astronomical and Astrophysical Society of America, 208; Day Numbers of Nautical Almanac, 208; Popular Astronomy for December, 208; the Piscian Stars, Sir Norman Lockyer, F.R.S., 213; Earth-shine, 235; Orbit of Eros, 236; Handbuch der Astronomischen Instrumentenkunde, Dr. L. Ambronn, 241; Central Star of Ring Nebula in Lyra, W. Stratonoff, 260; New Minor Planet (1899 E.V.), 283, 402; Herr Otto Knopf, 283; the Anomaly in movement of Jupiter's Fifth Satellite, O. Callandreaux, 287; Observations of, 287; Observations of the Diameter and Flattening of Jupiter, G. Bigourdan, 287; Star-land, Sir Robert S. Ball, F.R.S., 294; Density of Close Double Stars, 306; a New Photographic Photometer, Dr. J. Hartmann, 306; New System of Spectrum Photometry, Prof. D. B. Brace, 521; a Brilliant Meteor in Sunshine, 306; Reduction of Star Photographs, A. R. Hinks, 355; the Computation of Occultations, 355; Blaikie's Cosmosphere, 359; Die Photographie der Gestirne, Dr. J. Scheiner, 363; Definitive of Orbit of Comet (1897 III.), Herr E. Wessell, 374; New Variable Star in Draco, Dr. T. D. Anderson, 374; Time used in Ephemerides, 374; Study of Latitude-variations, Jean Boccardi, 383; Harvard College Observatory, 402; Interference Method of Measuring Small Diameters, M. Maurice Hamy, 402; Rapid Variations of Radial Velocity of  $\delta$  Orion, H. Deslandres, 407; Meteor Photography, 424; a Possible Cause of the Variability of Stars, Dr. G. Johnstone Stoney, F.R.S., 443; the Structure of the Inner Corona, Prof. S. P. Langley, For.M.R.S., 443; the Relation between the Periodic Changes of Solar Activity and the Earth's Motion, Dr. J. Halm, 445; Death of Dr. C. S. R. Luther, 449; Obituary Notice of, 473; Death and Obituary Notice of Emmanuel Liais, 450; Law of Diurnal Rotation of Optical Field of Siderostat and Heliostat, A. Cornu, 459; Death and Obituary Notice of Dr. G. Rümker, 473; Death and Obituary Notice of L. J. McCormick, 476; Search for an Intramercurial Planet, Prof. W. H. Pickering, 479; the New Twin Refractor at Potsdam, 479; the Benjamin Althorp Gould Fund, 479; Escape of Gases from Planetary Atmospheres, S. R. Cook, 501; Dr. G. Johnstone Stoney, F.R.S., 515; New Mode of using the Concave Diffraction Grating, Dr. G. B. Rizzo, 501, 541; Comet (1899 V.), 501, 521; Computation of Orbits of Spectroscopic Doubles, Dr. K. Schwarzschild, 521; Photographs of Stars, Star

Clusters and Nebulae, together with Records of Results obtained in the pursuit of Celestial Photography, Dr. Isaac Roberts, F.R.S., Dr. William J. S. Lockyer, 533; Planets at their Greatest Brilliancy, C. T. Whitnell, 540; Death of Catherine Wolfe Bruce, 544; New Variable in Andromeda, Dr. T. D. Anderson, 547; a Brilliant Fireball, Mr. Crommelin, 548; Opposition of Minor Planet (434) Hungaria, 453; the New Odessa Observatory, 454; the Development of Astronomy in America, 574; Rotation Period of Venus, 574; Variation of Latitude, Prof. Th. Albrecht, 574; Planetary Work at the Manora Observatory, 574; Bulletin de la Société Astronomique de France, 577; a Compound Prism of Uniform Dispersion, C. G. Abbott and F. E. Fowle, 597; Dynamical Criticism of Nebular Hypothesis, F. R. Moulton, 597; Cape Star Catalogue for 1890, Dr. Gill, 597; Photographs of Aurora Spectrum, M. Paulsen, 621; New Variables in Taurus and Cassiopeia, Dr. Anderson, 621; Formula for Atmospheric Refraction, L. Cruls, 621

Astruc (A.), Alkalimetry of Amines, 192

Atkinson (G. A. S.), Vapour-density of Bromine at High Temperatures, 285

Atkinson (Canon J. C.), Death and Obituary Notice of, 544

Atlantic Deep-sea Soundings, R. E. Peake and Sir John Murray, 286

Atlas of Meteorology, J. G. Bartholomew and A. J. Herbertson, 171

Atmospheric Electricity, J. Elster and H. Geitel, 422; John Aitken, F.R.S., 514

Atmospheric Electricity and Disease, Dr. Schliep, Prof. John Perry, F.R.S., 471

Atomic Theories: Essai critique sur l'Hypothèse des Atomes dans la Science Contemporaine, Arthur Hannequin, 26

Atoms, the Story of the Wanderings of, especially those of Carbon, M. M. Pattison Muir, 126

Atwater (Prof. W. O.), Law of Conservation of Energy in Human Organism, 258

Auriferous Gravel Man in California, the Evidence as to, W. H. Holmes, 206

$\alpha$  Aurigae, Spectroscopic Binary Stars, Prof. W. W. Campbell, 114

Auroch's Horn found in Pomerania, 135; Dr. Nehring, 400

Aurora Borealis, Photographs of Spectrum, M. Paulsen, 621

Austin (Martha), Constitution of Ammonium-magnesium Arseniate of Analysis, 310

Australia: On the Date of the Discovery of, E. Heawood, 20; the Naval Pioneers of Australia, Louis Becke, Walter Jeffery, 53; Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193; Geology of Western Australia, A. G. Maitland and T. Blatchford, 259; Memoirs of Royal Society of South Australia, Dr. E. C. Stirling, F.R.S., and A. H. C. Zietz, 275; the Melbourne Meeting of the Australasian Association, 494; Australian Experimental Farms, 528; Marine Zoology in Australia, Prof. W. A. Herdman, F.R.S., 590

Avigliana Dynamite Explosions, Effect of, Dr. M. Baratta, 451

Ayrton (Prof.), Use of Price's Guard Wire in Insulator Tests, 334

Babylonian Religion and Mythology, L. W. King, Frank Rede Fowke, 437

Bacei (Dr. P.), Wehnelt's Interrupter, 328

Bachhold (Dr.), Bacteria and Sewage Disposal, 63

Bachi da Seta, i., Prof. Tito Nenci, 77

Bacteriology: Bacteria and Sewage Disposal, Dr. Bachhold, 63; Prof. Potter on a Bacterial Disease—White Rot—of the Turnip, 66; Death of Dr. Camara Pestana, 84; the Rate of Multiplication of Yeast Cells, Dr. H. P. Hoyer, 113; Yeast-increase without Fermentation in Presence of Limited Quantity of Air, A. Rosenstiehl, 336; Insects as Carriers of Disease, Dr. G. H. F. Nuttall, 153; Outlines of Bacteriology, Dr. L. H. Thoinot and E. J. Masselin, 221; the Bacillus of "Doubleface" Disease in Beer, M. van Laer, 287; Bacterial Origin of Scurvy, Prof. A. M. Lévin, 400; System der Bakterien, Dr. W. Migula, Dr. E. Klein, F.R.S., 464; New Bacteria in Coal, B. Renault, 508; the Bacteriology of the Soil, Thos. T. Watson, 515; Effect of Liquid Air on Bacteria, Dr. Allan Macfadyen, 529; Influence of Temperature of Liquid Air on Bacteria, Dr. Allan Macfadyen and S. Rowland, 603; New Pathogenic Microbe in Rabbit, C. Phisalix, 580

- Bahamas, the Feather-stars of the, Prof. Verrill, 16  
 Bailey (Dr. L. W.), Mineralogy of New Brunswick, 16  
 Baillie-Grohman (W. A.), Fifteen Years' Sport and Life in the Hunting-grounds of Western America and British Columbia, 566  
 Baker (H. B.), Vapour Densities of Dried Mercury and Mercurous Chloride, 530  
 Baker (J. L.), Manno-galactan and Lævulo-mannan, 530  
 Baker (R. T.), the Essential Oil of *Darwinia fascicularis*, 483  
 Baker (T. J.), Frequency of Transverse Vibrations of Stretched India-rubber Cord, 334  
 Baker (W. M.), Elementary Dynamics, 221  
 Bakker (Dr. G.), the Molecular Potential Function, 156  
 Baldwin (D.), Action of Acetylene on Metallic Oxides, 93  
 Baldwin (Prof. J. Mark), Anlage and Rudiment, 29; the Royal Society Catalogue and Psychology, 226  
 Balfour (Mr.) on Scientific Research, 395  
 Ball (Sir Robert S., F.R.S.), Star-land, 294  
 Ballistics: Vibrations of Gun Barrels, C. Cranz, K. R. Koch, 58; Resistance to Projectiles in Air, 93; Law of Aërial Resistance to Projectiles, Paul Vieille, 359  
 Balloon Ascents, Recent International, Dr. H. Hergesell, 572  
 Balloon, Danilewsky's Dirigible, 372  
 Ballooning: Aeronaut poisoned by Hydrogen Gas, 618  
 Balloons in War, 83  
 Baly (E. C. C.), The Distillation of Liquid Air, 457  
 Bamberger (Prof.), Mechanism of Passage of Hydroxylamines into Amidophenoles, 63; Pyroly Aldehyde, 453  
 Bancroft (Dr. W. D.), New Formula for Ostwald's Dilution Law, 303  
 Baratta (Dr. M.), Effect of Avigliana Dynamite Explosions, 451  
 Barber (Samuel), a Brilliant Meteor, 326  
 Barbour (E. H.), Decline of Geyser Activity in Yellowstone Park, 398  
 Bardier (E.), Concerning Physiological Alternation of Kidneys, 483  
 Barents Sea, Natural History of the Shores of, H. J. Pearson, 348  
 Barisal Guns, Henry S. Schurr, 127  
 Barisal Guns and Earthquakes, Prof. A. Issel, 60  
 Barnard (Prof. E. E.), Orbit of Fifth Satellite of Jupiter, 157  
 Barrett (Prof.), Magnetic Properties of Aluminium, Nickel and Tungsten Steels, 23  
 Barrett Hamilton (Mr.), Colour-phases of Weasel, 451  
 Bartholomew (J. G.), Atlas of Meteorology, 171  
 Bartlett's (A. D.), Life among Wild Beasts in the "Zoo," 267  
 Barton (Dr. E.), Reflection and Transmission of Electric-waves along Wires, 334  
 Barus (C.), Hot Water and Soft Glass, 528  
 Bary (Paul), Fluorescence of Metallic Compounds under Röntgen and Becquerel Rays, 531  
 Bather (F. A.), Deceptive Bibliographic Indications, 367  
 Battelli (F.), Death by Electric Discharge, 24; Effects of Electric Discharges on Heart of Mammals, 239  
 Baumhauer (Prof. H.), Darstellung der 32 Möglichen Krystallklassen, 245  
 Baxandall (G. A.), Practical Plane and Solid Geometry, 101  
 Beasts: Thumbail Studies in Pets, Wardlaw Kennedy, 28  
 Beaumont (Prof. R.), Szczepanik's Photographic Process of preparing Textile Designs, 14  
 Beauregard (Dr. Henri), Obituary Notice of, 593  
 Bebbler (Dr. van), Scientific Weather Prediction for Agricultural Purposes, 185  
 Becke (Louis), The Naval Pioneers of Australia, 53  
 Becker (G. F.), Geology of South Alaskan Goldfields, 600  
 Becquerel (H.), Phosphorescence Phenomena of Radium Radiation, 166; Influence of Magnetic Field on Radiation of Radio-active Bodies, 192; the Radiation of Radio-active Bodies, 239; Radium and Polonium Rays in Magnetic Field, 355; Radium and Polonium Rays, 371; The Radium Radiations, 359; Dispersion of Radium Rays in Magnetic Field, 407; Negative Charge communicated by Radium Rays, 498; Deviations of Radium Rays in Electric Field, 555; Origin of Energy of Becquerel Rays, 547  
 Becquerel Rays: Suggested Source of the Energy of the, Dr. Fred T. Trouton, F.R.S., 443; The Absorption of the Becquerel Rays by Solid and Gaseous Bodies, Hon. R. J. Strutt, 539; Origin of Energy of Becquerel Rays, H. Becquerel, 547  
 Beddard (F. E.), a Book on Whales, 585  
 Bedford (F. P.), Notes on the Occurrence of Amphioxus at Singapore, 444  
 Beecher (C. E.), Uintacrinus from Kansas, 626  
 Beer, Heather, Dr. W. C. MacLagan, 286  
 Beer, the Bacillus of "Double-face" Disease in, M. Van Laer, 287  
 Beetles, Stridulating, Mr. Gahan, 406  
 Beginselen der Scheikunde, Dr. M. C. Schuyten, 220  
 Béhal (H. A.), Mixed Oxyhydrides of Fatty and Aromatic Acids, 48  
 Behn (U.), Specific Heats of Metals at Low Temperatures, 554; Heat of Sublimation of Carbonic Acid and of Evaporation of Air, 554  
 Belgian Antarctic Expedition, Geographical Results of, Dr. F. A. Cook, 258  
 Bell (Sir I. L., F.R.S.), Development of Manufacture and Use of Rails in Great Britain, 595  
 Belopolsky (Herr A.), Spectrum of P Cygni, 137  
 Beltrami (Prof. E.), Death of, 449; Obituary Notice of, Prof. G. H. Bryan, F.R.S., 568  
 Bemmelen (D. W. van), Spasms in Earth's Magnetic Force, 72  
 Bénard (Henri), Movements produced in Liquids by Heat Connection, 604  
 Bénech (Élophé), Action of Phenyl Isocyanate and Isothiocyanate on Dibasic Acids, 580  
 Benham (Prof. W. B.), the Takahe (*Notornis hochstetteri*), 576  
 Bentley (Dr. I. M.), Relative Fidelity of Memory Image, 60  
 Berget (A.), Microphonic Registration of Beat of Chronometer, 71  
 Bergholz (Dr. Paul), Die Orkane des Fernen Ostens, 317  
 Berlin Academy of Sciences, the Bi-Centenary of the, 469, 494  
 Berlin Geographical Congress, Meteorology at the, A. Lawrence Rotch, 177; the Writer of the Report, 177  
 Bernard (H. M.), the Structure of Porites, 213  
 Bernthsen (Herr), the Formula of Hyposulphurous Acid, 354  
 Berthelot (Daniel), Simultaneous Oxidation and Hydration under Free Oxygen and Light, 24; the Explosion of Potassium Chlorate, 166; General Method for Estimating some Elements in Organic Compounds, 192; Value of Internal Pressure in Equations of Van Waals and Clausius, 287; the Co-volume in Characteristic Equation of Fluids, 311; Association of Molecules in Liquids, 459; Heat of Combustion of some very Volatile Liquids, 627  
 Bertrand (Joseph), Death of, 544; Obituary Notice of, Prof. G. H. Bryan, F.R.S., 614  
 Bertrand (Marcel), Mechanical Theory of Mountain Formation, 383  
 Bertrand (Prof.), on the Structure of a Stem of a Ribbed *Sigillaria*, 68  
 Beudantite (E. G. J. Hartley), 382  
 Bevier (Prof. Louis), the Acoustic Analysis of the Vowels from the Phonographic Record, 467  
 Beyerinck (Prof.), the Production of Indigo from Woad, 71  
 Biblica, Encyclopedia, Rev. T. K. Cheyne, 148  
 Bibliographic Indications, Deceptive, F. A. Bather, 367  
 Bi-Centenary of the Berlin Academy, 469, 494  
 Biela's Comet, the Meteors of, E. C. Willis, 78; W. F. Denning, 78  
 Biellid Meteor-periods, Contemporary Meteor-showers of the Leonid and, Prof. A. S. Herschel, F.R.S., 222, 271  
 Biffen (R. H.), Account of *Bulgaria polymorpha* (Wettstein) as a Wood-destroying Fungus, 66; on India-Rubber, 68  
 Bigelow (F. H.), Results of International Cloud Work for U.S.A., 190  
 Bigourdan (G.), Observations of Diameter and Flattening of Jupiter, 287  
 Billiards Mathematically Treated, G. W. Henning, 410, 468; S. H. Burbury, F.R.S., 410  
 Biographical Dictionary, Who's Who, 1900, an Annual, 270  
 Biology: Anlage and Rudiment, Prof. J. Mark Baldwin, 29; Cocospheres and Rhabdospheres, George Murray, F.R.S., 54; Statistical Methods: with Special Reference to Biological Variation, C. B. Davenport, 149; Experiments on Growth of Tadpoles' Tails, R. G. Harrison, 206; Molecular Structure of Organised Bodies, F. W. Jones, 273; L'Année Biologique, 313; Fixierung, Färbung, und Bau des Protoplasmas: Kritische untersuchungen ueber Technik und Theorie in der Neueren Zellforschung, Dr. Alfred Fischer, Prof. J. B. Farmer, 385; Life under other Conditions, Geoffrey Martin, 452; Death of Prof. St. George Mivart, 544; Obituary Notice of, 569; Certain Laws of Variation, Dr. H. M. Vernon, 577; Experimental Study of Fertilisation, Prof. Yves Delage, 551;

- Significance of Increased Size of Cerebrum in Recent as Compared with Extinct Mammalia, Prof. E. R. Lankester, F.R.S., 624; Marine Biology: the Stockholm Fisheries Conference, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; Geo. Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413; Liverpool Marine Biology Committee's Memoirs, I. *Ascidia*, Prof. W. A. Herdman, F.R.S., 126; Some Recent Work of the Marine Biological Association, 79; a Great Salt Lake Problem, 204; Medusae of Millepora, S. G. Hickson, F.R.S., 213; the Structure of Porites, H. M. Bernard, 213; Biological Lectures from the Marine Biological Laboratory, Wood's Holl, Massachusetts, 1898, 244; Ancestry of Heliporidae, J. W. Gregory, 311; Trawling in Pacific, A. Agassiz, 529; the Blue Coral, Prof. J. W. Gregory, 555; Report of the Marine Biologist for the Year 1898, Cape of Good Hope Department of Agriculture, E. J. Allen, 562
- Birch Ale, Dr. W. C. MacLagan, 286
- Birch-Hirschfeld (Dr.), Death of, 134
- Birds: Birds Capturing Butterflies, F. Finn, 55; Oswald H. Latter, 56; Howard Fox, 152; George A. Soper, 194; a Hand-list of the Genera and Species of Birds, R. Bowdler Sharp, LL.D., 126; Our Rarer British Breeding Birds, their Nests, Eggs, and Summer Haunts, R. Kearton, 323; the Birds of Rhode Island, R. H. Howe, jun., and E. Sturtevant, 323; the Birds of Eastern North America: Water Birds, C. B. Cory, 323; the Fauna of South Africa: Birds, A. C. Stark, 516; the Birds of Africa, comprising all the Species which occur in the Ethiopian Region, G. F. Shelley, 516; the Birds of Celebes, A. B. Meyer and L. W. Wieglesworth, 605
- Bishop (Mrs. J. F.), the Yangtze Valley and Beyond, 252
- Blaikie's Cosmospere, 359
- Blaise (E. E.), Camphenylene, 144;  $\alpha\alpha\beta$ -trimethyl- $\beta$ -oxyadipic Acid, 604
- Blakesley (T. H.), Exact Formulæ for Lenses, 165
- Blanc (G.), Camphenylene, 144; Action of Aluminium Chloride on Camphoric Anhydride, 192; Amines containing the Camphor Ring, 287; Synthesis of Campholic Acid, 407
- Blanchard (Prof. Émile), Death of, 370; Obituary Notice of, 473
- Blandford (W. F. H.), the Cambridge Natural History, 49
- Blanford (Dr. W. T., F.R.S.), the Dwyka (South Africa) Boulder-beds, 191; a Particular Form of Surface, the Result of Glacial Erosion, 311
- Blankasma (J. J.), Action of Sodium Mono- and Disulphides on Aromatic Nitro Compounds, 216
- Blatchford (A. G.), Geology of Western Australia, 259
- Bleier (Dr. Otto), Vapour Density of Sulphur, 64; True Molecular Weight of Gaseous Sulphur, 373
- Blowpipe Analysis, the Elements of, Frederick Hutton Getman, 176
- Blue Colour in Woad, on the, Dr. Charles B. Plowright, 331, 563
- Boccardi (Jean), Study of Latitude Variations, 383
- Bohr (C.), Solubility of Carbonic Acid in Alcohol at Various Temperatures, 554
- Bois (H. du), Molecular Susceptibility of Salts of Rare Earths, 432
- Bolletino della Società Sismologica Italiana, 23, 405, 504
- Bone (W. A.), Sym-dipropyl, Sym-diisopropyl and  $\alpha\alpha$ -propylisopropyl Succinic Acids, 530
- Bonnefoi (J.), Combinations of Lithium Chloride with Ethylamine, 239
- Bonnevie (Kristine), Zoology of Norwegian North Atlantic Expedition, 258
- Bonney (Prof. T. G., F.R.S.), the International Geography, 50; Die hochgebirge der Erde, Robert von Lendenfeld, 219
- Bonnier (Gaston), Plant-adaptation to Mediterranean Climate, 239
- Boodle (L. A.), on his Researches into the Stem-structure in *Schizaceae*, *Gleicheniaceae* and *Hymenophyllaceae*, 67
- Book on Whales, a, F. E. Beddard, F.R.S., 585
- Borchers (Dr. W.), Electrolytic Processes in Industry, 206
- Borchgrevink's Antarctic Expedition, Return of, 544
- Bordier (H.), Specific Heat of Blood, 532
- Botany: Botany and the Indian Forest Department, Prof. W. Schlich, 6; the Indian Forest Service, W. F. Sinclair, 31; a Gutta-percha Plant, Prof. F. E. Weiss, 7; Les Arbres à Gutta-percha, leur Culture: Mission relative à l'Acclimatation de ces Arbres aux Antilles et la Guyane, Henri Lecomte, 538; Self-grafting of Monocotyledons, Lucien Daniel, 24; Ueber den Habitus der Coniferen, Dr. A. H. Burt, 28; an English Station for Botanical Research in the Tropics (Ceylon), John C. Willis, 32; Mangabeira Rubber, 38; Peculiar Structures on Peritheces of *Phyllactinea coryleae*, E. S. Salmon, 46; Journal of Botany, 46, 262, 603; Death and Obituary Notice of William Pamplin, 59; Production of Indigo from Woad, Prof. Beyerinck, 71; on the Blue Colour in Woad, Dr. Charles B. Plowright, 331, 563; Linnean Society, 94, 142, 213, 264, 358, 406, 458, 506, 555, 627; the Antibes Carnation Disease, MM. Prillieux and Delacroix, 95; Absorption of Iodine by Plants, P. Bourcet, 96; Sylvia in Flowerland, Linda Gardiner, 102; Experiments on the Floral Colours, P. Q. Keegan, 105; Death and Obituary Notice of Prof. P. Knuth, 110; Histological Mortifications produced by Phytophth in Stems, Marion Molliard, 120; Comparative Anatomy of Encephalartos, W. C. Worsdell, 142; Poisonous Plants and Animals, J. E. Harting, 142; Resistance of Seeds to High Temperatures, Victor Jodin, 144; the Student's Flora of New Zealand and the Outlying Islands, Thomas Kirk, W. Botting Hemsley, F.R.S., 146; List of the Genera and Species of New Zealand Plants, A. Hamilton, W. Botting Hemsley, F.R.S., 146; Fertilisation of Flowers in New Zealand, Geo. M. Thomson, 564; a Practical Introduction to the Study of Botany: Flowering Plants, Prof. J. Bretland Farmer, 150; Intumescences on *Hibiscus vitalis*, E. Dale, 165; the North American Slime Moulds, Prof. T. H. MacBride, 173; the "Wilt" Disease of Cotton, &c., E. F. Smith, 186; the Yellow Potato-blight, Prof. T. Johnson, 191; First Mitosis of Liliun Spore-mother Cells, Dr. H. H. Dixon, 191; Double Fertilisation in Liliun, L. Guignard, 507; Chlorophyll Assimilations in Solar Light through Leaves, Ed. Griffon, 239; the Plant-adaptation to Mediterranean Climate, Gaston Bonnier, 239; Science Teachers in Conference, 283; the Culture of White Lupins, P. P. Dehérain and C. Demoussy, 287; Culture of Blue Lupins, P. P. Dehérain and C. Demoussy, 435; Soluble Ferments produced during Germination of Seeds with Horny Albumen, Em. Bourquelot and H. Hérissey, 287; Gli Agrumi, Prof. Antonio Aloï, 294; Das Geschlecht der Pflanzen, R. J. Camerarius, 293; Origin of Basidiomycetes, George Massee, 358; Experiments on Periodic Movement of Plants, D. F. M. Pertz and Francis Darwin, 359; Seminae, Em. Bourquelot and H. Hérissey, 384; Indian Corn, Kumagasa Minakata, 392, 515; W. F. Sinclair, 445; Nitragin and the Nodules of Leguminous Plants, Maria Dawson, 405; Digestion of Reserves in Seeds during Germination, M. Mazé, 407; Etherisation of Plants, Prof. W. Johanssen, 423; Plant Relations: a First Book of Botany, John Coulter, 442; a Fungus Disease of Cypress and Cedar, Dr. H. von Schrenk, 452; Hartley Botanical Laboratories of University College, Liverpool, 454; *Asplenium Bradleyi*, R. M. Middleton, 458; the Potency and Prepotency of Pollen, Prof. H. Marshall Ward, F.R.S., 470; the Essential Oil of *Darwinia fascicularis*, R. T. Baker and H. G. Smith, 483; Effect of Longitudinal Traction in Plant-stems, M. Thouvenin, 483; Variations in Haricots under Grafting, Lucien Daniel, 483; Mistletoe-distribution in Belgium, E. Laurent, 520; Effect of Cold on Plant-nuclei, MM. L. Matruchet and Molliard, 531; Toxic Effects of Compounds of Alkaline Earths on Plants, Henri Coupin, 532; Chlorophyll, Formation in Dark, M. Radais, 532; List of Published Names of Plants introduced to Cultivation, 1876-1896, Kew Bulletin of Miscellaneous Information, Dr. Maxwell T. Masters, F.R.S., 537; Handbook of Tender Dicotyledons cultivated in the Royal Gardens, Kew, Dr. Maxwell T. Masters, F.R.S., 537; Botany of Mount Roraima, I. H. Burkill, 555; Law of Separation of Hybrids, H. de Vries, 556; Grundzuge der geographisch-morphologischen Methode der Pflanzensystematik, Dr. R. von Wettstein, 563; Death of Mrs. Lankester, 593; Electro-culture, V. A. Tyurin, 602; Hydrolysis of Raffinose by *Penicillium glaucum*, M. Gillot, 621; the Sphenophyllales, Dr. D. H. Scott, F.R.S., 627; Physiological Phenomena of Chlorosis in Vine, Georges Curtel, 628
- Bothamley (C. H.), Rural Education, 55
- Bottego, Seconda Spedizione. L'Omo. Viaggio d'Esplorazione nell' Africa Orientale, L. Vannutelli and C. Citeri, 75
- Bottomley (J. F.), Ethyl Pentanehexacarboxylate, 405
- Bouchard (Ch.), Transformation of Fat into Glycogen in Organism, 555

- Bourcet (P.), Absorption of Iodine by Plants, 96  
 Bourquelot (Em.), Soluble Ferments produced during Germination of Seeds with Horny Albumen, 287; Seminase, 384  
 Bouveault (L.), Synthesis of Phorone of Camphoric Acid, 407  
 Bouverie (H. H. P.), a Daylight Meteor, 279  
 Bower (Prof.), on Fern Sporangia and Spores, 66  
 Bowman (Dr. F. H.), Milk-preservation by Aération, 507  
 Bowtell (N. E.), Action of Alcoholic Potash on Monobromoglutaric Ester, 264  
 Boyce (Prof. R.), Oysters and Disease, 587  
 Boyer (J.), Histoire des Mathématique, 510  
 Boyhood of a Naturalist, the, Fred Smith, 246  
 Boynton (W. B.), Gibbs' Thermodynamical Model, 414  
 Boys (C. V., F.R.S.), the Theory of Water Finding by the Divining Rod: its History, Method, Utility and Practice, B. Tompkins, 1  
 Brace (Prof. D. B.), New System of Spectrum Photometry, 521  
 Brady (G. S.), the Natural History Museum: a Correction, 540  
 Braemer (Dr.), Atlas de Photomicrographie des Plantes Médicinales, 539  
 Brain in Relation to Mind, Dr. J. Sanderson Christison, 295  
 Brame (J. S. S.), Laboratory Note-book for Chemical Students, 412; Modern Explosives, 548  
 Branly (Edouard), Transmission of Hertzian Waves through Liquids, 47; Increases of Resistance in Radio-conductors, 628  
 Bräuer (Dr. P.), Aufgaben aus der Chemie und der Physikalischen Chemie, 489  
 Brauner (Prof.), Position of Rare Earths in Periodic System, 64  
 Bremer (Dr. K.), Aniline Dye Tests for Glucose, 215  
 Bridges, Pontoon-based Swing, at Northwich, 135, 327  
 Brightmore (Prof. A. W.), Floating Stones, 346  
 Britain: the Silurian Rocks of Britain. Vol. i.: Scotland, B. N. Peach, F.R.S., and J. Horne, 25  
 Britain, Animals of, and their Origin, Dr. R. F. Scharff, 341  
 British Animals, Types of, F. G. Afalo, 77  
 British Association, Meeting at Bristol, 1898, Sir William Crookes' Presidential Address to the, Sir R. Giffen, K.C.B., F.R.S., 169  
 British Association, Meeting at Dover. *Section E (Geography) continued.*—Account of the Trial Trip of the Great Russian Ice-breaker, *Yermak*, Admiral Makaroff, 17; Arctic Exploration, Walter Wellman, 17; Account of the Cruise of Sir George Newnes' Yacht, *Southern Cross*, from Hobart to Cape Adare, Dr. H. R. Mill, 18; Account of the Voyage and Wintering of the Belgian Expedition in the Antarctic Ice-pack South-west of Cape Horn, H. Arctowski, 18; Further Work required in Antarctic Exploration and Method of conducting it, H. Arctowski, 18; Physical and Chemical Work required for an Antarctic Expedition, J. Y. Buchanan, F.R.S., 18; Prof. Rücker, Major Darwin, Mr. George Murray, Dr. Koettlitz on Antarctic Exploration, 19; Dr. Gerhard Schott on the Chief Results of the Voyage of the *Valdivia*, 19; Observations of Temperature of Water and Air round the British Isles, H. N. Dickson, 19; on the Temperature and Salinity of the Surface Water of the North Atlantic during 1896 and 1897, H. N. Dickson, 19; Suggested System of Terminology for the Forms of Sub-oceanic Relief, Dr. H. R. Mill, 19; on the Relation of Christmas Island to the Neighbouring Lands, C. W. Andrews, 19; Progress of the Work of the Ordnance Survey during the last Twelve Years, Colonel Sir John Farquharson, 20; Mr. Vaughan Cornish on the Sand-dunes bordering the Delta of the Nile, dealing with the Ripples, Sand-dunes and Dune-tracts in turn, 20; Mr. E. Heawood on the Date of the Discovery of Australia, 20  
*Section G (Mechanical Science) continued.*—Messrs. Goode and Matthews on the Admiralty Harbour Works at Dover, 20; Sir Charles Hartley on the Engineering Works of the Suez Canal, 21; Mr. Parsons on Details of the Fast Cross-Channel and Atlantic Liners, 21; Mr. Mark Robinson on the Niclausse Water-tube Boiler, 21; Captain Lloyd on a Method which has been developed at Elswick for discharging Torpedoes below Water from the Broadside of a Ship when Steaming at a High Speed, 21; M. Alby on the Construction and Erection of the Alexander III. Bridge over the Seine in Paris, 21; Mr. Cowper-Coles on some Recent Applications of Electro-metallurgy to Mechanical Engineering, 21; Mr. Thornycroft on Recent Experiences with Steam on Common Roads, 22; Mr. Edward Case on the Dymchurch Sea-wall and the Reclamation of the Romney Marshes, 22  
*Section H (Anthropology) continued.*—Mr. E. R. Henry on Finger Prints as a Method for the Identification of Criminals, 42; Mr. Sidney H. Ray on the Linguistic Results of the Cambridge Expedition to Torres Straits and New Guinea, 42; Mr. C. S. Myers on Savage Music in Murray Island and Sarawak, 42; Mr. C. G. Seligmann, Account of the Seclusion of Girls at Puberty, in Mabaig, and other of the Western Islands of Torres Straits and also on the Mainland at Cape York, 43; Mr. C. G. Seligmann on the Club Houses and Dubus of British New Guinea, 43; Dr. W. H. R. Rivers on the Investigations on Comparative Psychology made in Torres Straits and New Guinea, 43; Mr. A. J. Evans on the Occurrence of Celtic Types of Fibula of the Hallstatt and La Tène Periods in Tunisia and Eastern Algeria, 43; Mr. G. Coffey on Irish Copper Celts, 43; Mr. J. Gray on Recent and Most Excellent Ethnographical Work in East Aberdeenshire, 43; Mr. D. MacIver on Recent Anthropometrical Work in Egypt, 43; Prof. W. M. Flinders Petrie on Sequences of Prehistoric Remains, 43; Prof. W. M. Flinders Petrie on Early Mediterranean Signatures and the Sources of the Alphabet, 44; Dr. A. C. Haddon on the Yaraikanna Tribe of Cape York, 44; Mr. W. Crooke on the Primitive Rights of Disposal of the Dead as Illustrated by Survivals in Modern India, 44; Mr. R. R. Marett on Pre-animistic Religion, 44; Colonel R. C. Temple on the Thirty-seven Nats (or Spirits) of the Burmese, 44; Dr. W. H. R. Rivers on Two New Methods of Anthropological Research, 44; Ethnographic Survey of Canada, 45  
*Section K (Botany) continued.*—Mr. W. Williams on the Life-history and Cytology of *Halidrys Siliginosa*, 65; Prof. Marshall Ward on his Recent Work on *Oxyglena equina*, a Horn-destroying Fungus, 65; Mr. R. H. Biffen, Account of *Bulgaria polymorpha* (Wettstein) as a Wood-destroying Fungus, 66; Mr. A. Howard on a Disease of *Tradescantia*, 66; Prof. Potter on a Bacterial Disease—White Rot—of the Turnip, 66; Mr. Harold Wager on the Phosphorus-containing Elements in Yeast, 66; Prof. Ward on Methods for Use in the Culture of Algae, 66; Mr. W. G. Freeman on the *Anabaena*-containing Roots of some Cycads, 66; Mr. E. J. Butler on a Mixed Infection in *Abutilon* Roots, 66; Prof. Bower on Fern Sporangia and Spores, 66; Mr. L. A. Boodle on his Researches into the Stem-structure in *Schizaeaceae*, *Gleicheniaceae* and *Hymenophyllaceae*, 67; Sir William Thistlethorn-Dyer on Some Experiments made by Prof. Dewar on the Influence of the Temperature of Liquid Hydrogen on the Germinative Power of Seeds, 67; Mr. Francis Darwin on Investigations on the Localisation of the Irritability in Geotropic Organs, 67; Mr. J. Parkin on Some Isolated Observations Bearing on the Function of the Latex, 67; Mr. R. H. Biffen on India-rubber, 68; Mr. J. C. Willis on the Morphology and Life-history of the Indo-Ceylonese Podostemaceae, 68; Prof. Douglas Campbell on the Development of the Flowers and Embryos of Various Species of Araceae, 68; Mr. G. Dowker on the Sand-dunes between Deal and Sandwich, with Remarks on the Flora of the District, 68; Miss Dale on Intumescences of *Hibiscus vitifolius*, 68; Prof. Bertrand on the Structure of a Stem of a Ribbed *Sigillaria*, 68; Prof. F. E. Weiss on a Biseriate *Halonia* belonging to the Genus *Lepidophloeis*, 68; Mr. A. C. Seward on a New Genus of Palaeozoic Plants, 69; Mr. A. C. Seward on the Jurassic Flora of Britain, 69; Mr. A. C. Seward and Miss J. Gowan on the Morphology and Geological History of the Maidenhair Tree (*Ginkgo biloba*), 69; Corresponding Societies of the British Association, 115; Rev. T. R. R. Stebbing on the Living Subterranean Fauna of Great Britain and Ireland, 116  
 British Breeding Birds, Our Rarer, their Nests, Eggs and Summer Haunts, R. Kearton, 323  
 British Dragonflies, W. J. Lucas, 418  
 British Fisheries Investigations, the Stockholm Fisheries Conference and, E. J. Allen, 227, 275  
 British Journal Photographic Almanac for 1900, 175

- Broadbent (Dr.), the "Silver Thread" Phenomenon in Giggleswick Well, 70  
 Broca (André), La Télégraphie sans Fils, 243  
 Brochet (H. A.), Electrolysis of Potassium Chloride, 312, 508  
 Brodie (F. J.), Wire Fences and Lightning, 258  
 Brough (Bennett H.), a Rudimentary Treatise on Coal and Coal-mining, Sir Warrington W. Smyth, F.R.S., 411  
 Brown (Prof. S. J.), Determination of Axis and Compression of Neptune, 621  
 Browning (K. C.), Reaction between Sulphuric Acid and Potassium Ferrocyanide, 190  
 Browning (P. E.), Estimation of Thallium as Acid and Neutral Sulphate, 432  
 Bruce (Catherine Wolfe), Death of, 54  
 Brinhes (B.), Measurement of Velocity of Röntgen Rays, 311; Duration of Emission of Röntgen Rays, 604  
 Bruyn (Prof. L. de), *d*-Sorbitose and *l*-Sorbitose, 216  
 Bryan (Prof. G. H., F.R.S.), *Traité élémentaire de Mécanique Chimique fondée sur la Thermodynamique*, Prof. P. Duhem, 73; the Resistance of the Air, 107, 248; the Kinetic Theory of Gases, Dr. Oskar Emil Meyer, 289; a Treatise on the Kinetic Theory of Gases, S. H. Burbury, 289; the Mathematical Tripos, 346; Obituary Notice of Eugenio Beltrami, 508; Obituary Notice of Joseph Bertrand, 614  
 Bryant (Sophie), Euclid, Books I.-IV., 102  
 Buchanan (J. V., F.R.S.), Physical and Chemical Work required for an Antarctic Expedition, 18  
 Budge (E. A. Wallis), Books on Egypt and Chaldaea. Egyptian Ideas of the Future Life; Egyptian Magic, 437  
 Budgett (J. S.), Polypterus and Protopterus, 166  
 Buenos Aires, Anales del Museo Nacional de, 46, 372  
 Bulgarian Lepidoptera, H. J. Elwes, 627  
 Bulletin of American Mathematical Society, 93, 213, 404, 554, 577. See Transactions.  
 Bulletin de la Société Astronomique de France, 577  
 Burbury (S. H., F.R.S.), the Kinetic Theory of Gases, 289; Billiards Mathematically Treated, G. W. Hemming, 410  
 Burdon-Sanderson (Sir J., Bart.), the Relation between Science and Medicine, 254  
 Bureau (Ed.), *Equisetum Jolyi*, 384  
 Burghard (F. F.), a Manual of Surgical Treatment, 176  
 Bürker (K.), Mixture of Three Powders for producing Electric Dust-figures, 627  
 Burkill (J. H.), Botany of Mt. Roraima, 555  
 Burmese, On the Thirty-seven Nats (or Spirits) of the, Colonel R. C. Temple, 44  
 Burstall (Prof. F. W.), American Higher Technical Education, 299  
 Burt (Dr. A. H.), Ueber den Habitus der Coniferen, 28  
 Busquet (Paul), Les Êtres Vivants, 608  
 Butler (Charles P.), Echelon Film Gratings, 275  
 Butler (E. J.), On a Mixed Infection in *Abutilon* Roots, 66  
 Butterflies, Birds capturing, F. Finn, 55; Oswald H. Latter, 56; Howard Fox, 152; George A. Soper, 491  
 Butterfly Shadows, Commander D. Wilson-Barker, 128  
 Cable, an Aluminium Electric, 399  
 Cables, Submarine, the Action of Electric Tramways on Land End of, Prof. Andrew Jamieson, 595  
 Calculate, to, a Simple Table of Logarithms, Dr. Arthur Dufton, 415; Prof. John Perry, F.R.S., 415  
 Calculating Logarithms, Mechanical Method of, H. C. Pocklington, 469  
 Calendar, Difficulties of the, W. T. Lynn, 493  
 California, the Evidence as to Auriferous Gravel Man in, W. H. Holmes, 206  
 Callandrea (O.), Anomaly in Movement of Jupiter's Fifth Satellite, 287  
 Callendar (Prof. H. L., F.R.S.), a Text-book of Physics, W. Watson, 537, Heat for Advanced Students, Edwin Edser, 557, Text-book of Experimental Physics, Eugene Lommel, 557  
 Calmette's Antivenene, Snake-bite Cured by, Major S. J. Rennie, 85  
 Cambridge: Linguistic Results of the Cambridge Expedition to Torres Straits and New Guinea, Sidney H. Ray, 42; the Cambridge Natural History, David Sharp, W. F. H. Blandford, 49; Cambridge Philosophical Society, 95, 165, 214, 359, 458, 482, 507; the Proposed Changes in the Mathematical Tripos, 106, Prof. G. H. Bryan, 346; Engineering at Cambridge, 346; the Cambridge Crystallography, W. J. Lewis, Prof. H. A. Miers, F.R.S., 485; Sir Michael Foster, K.C.B., M.P., and his Pupils, 497  
 Camerarius (R. J.), Das Geschlecht der Pflanzen, 293  
 Campbell (Prof. Douglas), on the Development of the Flowers and Embryos of various Species of Araceae, 68  
 Campbell (J. R.), the Eradication by Spraying of Charlock and Runch, 186  
 Campbell (Prof. W. W.), Spectroscopic Binary Stars, *a Aurigae*, *a Ursae Minoris*, 114  
 Canada: Ethnographic Survey of, 45; Alaska and the Klondike: a Journey to the New Eldorado, with Hints to the Traveller and Observations on the Physical History and Geology of the Gold Regions, the Conditions of Working the Klondike Placers, and the Laws Governing and Regulating Mining in the North-west Territory of Canada, Angelo Heilprin, 122; Canadian Lake of Subterranean Inflow, Andrew T. Drummond, 128; Mineral Production in 1899 of Canada, E. D. Ingall, 545  
 Canal, the Chicago Drainage, 353  
 Canal, the Soulanges, 40  
 Cancani (Dr. A.), the Latian Earthquake of July 19, 1899, 573  
 Cancer, Morphology of Carcinomatous Blastomycetes, K. W. Montsarrat, 285  
 Canton (M.), Absorption of Light in Electrically Glowing Gases, 626  
 Cape of Good Hope Meteorological Report for 1898, 39  
 Carbon: the Story of the Wanderings of Atoms, especially those of Carbon, M. M. Pattison Muir, 126; Determination of Radicles in, Dr. H. Meyer, 538  
 Carriers in the Kathode Rays, on the, W. B. Morton, 365  
 Carus-Wilson (Cecil), Floating Stones, 318  
 Carvalho (E.), Nature of White Light, 287  
 Case (Edward), on the Dymchurch Sea-wall and the Reclamation of the Romney Marshes, 22  
 Cash (Joseph), Artificial Silk, 156  
 Castle (Frank), Elementary Practical Mathematics, 53  
 Caucasian Vine-disease, a, MM. Prillieux and Delacroix, 385  
 Causse (H.), Contaminated Lyons Well-waters, 459; Detection of Cystine in Water, 531  
 Cave-Ice, the Origin and Occurrence of, Dr. Hans Lohmann, 591  
 Cazeneuve (P.), Mode of Synthesis of Parabanic Acid, 120; Preparation of Carbazides, 239  
 Celebes, the Birds of, A. B. Meyer and L. W. Wigglesworth, 605  
 Celestial Photography, Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the pursuit of, Dr. Isaac Roberts, F.R.S., Dr. William J. S. Lockyer, 533  
 Celestial Photometry, Prof. Dr. G. Müller, 509  
 Cell-theory, Inadequacy of, Les Êtres Vivants, par Paul Busquet, 609  
 Centenary of the Berlin Academy of Sciences, the, 469  
 Central Star of Ring Nebula in Lyra, W. Strattonoff, 260  
 Century of Science and other Essays, a, John Fiske, 390  
 Céramique, la, Ancienne et Moderne, E. Guignat et E. Garnier, 466  
 Ceraski's First Algol Variable, Light Curve of, 355  
 Ceraski's Second Algol Variable, Prof. E. C. Pickering, 454  
 Cerebrum in Recent as compared with Extinct Mammalia, Significance of Increased Size of, Prof. E. R. Lankester, F.R.S., 624  
 Ceylon, an English Station for Botanical Research in the Tropics, John C. Willis, 32  
 Chadwick (O.), a Treatise on Surveying, 150  
 Chaldaea, Books on Egypt and, Egyptian Ideas of the Future Life, Egyptian Magic, E. A. Wallis Budge, Frank Rede Fowke, 437  
 Changes of Colour of Prawns, F. W. Keeble and F. W. Gamble, 552  
 Channel, English, Water-temperature of Mouth of, Mr. Garstang, 450  
 Chapman (E. M.), Action of Fuming Nitric Acid on *n*-dibromocamphor, 335; Acids obtained from *a*-dibromocamphor, 505  
 Chardonnet Process of Manufacturing Artificial Silk, the, Joseph Cash, 156  
 Chauveau (A. B.), the Diurnal Variations of Atmospheric Electricity, 136  
 Chavastillon (R.), Separation of Rare Earths, 531  
 Chemistry: Essais des Huiles Essentielles, Henri Labbé, 5;

Chemistry for Organised Schools of Science, S. Parrish, 5; on the Distribution of the various Chemical Groups of Stars, Sir Norman Lockyer, K.C.B., F.R.S., 8; Simultaneous Oxidation and Hydration under Free Oxygen and Light, Daniel Berthelot, 24; Essai critique sur l'Hypothèse des Atomes dans la Science contemporaine, Arthur Hannequière, 26; Laboratory Outline of General Chemistry, Alexander Smith, 27; Eudesmol, H. G. Smith, 47; Atomic Weight of Boron, H. Gautier, 48; Mixed Oxyhydrides of Fatty and Aromatic Acids, H. A. Béhal, 48; Naphthopurpurin, G. F. Jaubert, 48; Einführung in die Chemie in leichtfasslicher Form, Prof. Dr. Lassar-Cohn, 51; L'Industrie des Matières Colorantes Azoïques, George F. Jaubert, 53; Arithmetical Exercises in Chemistry, Leonard Dobbin, 53; Laboratory Manual: Experiments to illustrate the Principles of Chemistry, H. W. Hillyer, 52; the Preparation of Metallic Cesium, Herren Graefie and Eckhardt, 61; Experiments on Condensation of Aromatic Diamines with Dibasic Acids of Oxalic Series, Richard Meyer, 63; Condensation Products of Benzaldehyde with Succinic Ethers, Dr. H. Stobbe, 63; Mechanism of Passage of Hydroxylamines into Amidophenoles, Prof. Bamberger, 63; the Aldoles, Prof. Lieben, 64; Position of Rarer Earths in Periodic System, Prof. Brauner, 64; Researches in Camphor Series, Dr. Duldner, 64; the Colloid Metals, Prof. E. von Meyer and Dr. Lattermann, 64; Base obtained by Action of Hydrochloric Acid on Albumen, Rudolf Cohn, 65; Vapour and Density of Sulphur, Dr. Otto Bleier, 64; True Molecular Weight of Gaseous Sulphur, O. Bleier and L. Kohn, 373; Liquid Sulphur Dioxide as an Ionising Solvent, Prof. Walden, 114; Attempts to Resolve into Active Constituents Compounds containing Asymmetric Sulphur Atoms, S. Smiles, W. J. Pope and S. J. Peachey, 373; Sulphur Perfluoride, Henri Moissan and P. Lebeau, 579; a Sulphur Fluoride Gas, Henri Moissan, 596; Density and Analysis of Sulphur Perfluoride, Henri Moissan and P. Lebeau, 603; Glycogen, Armand Gautier, 71; Molybdenum Dioxide, Marcel Guichard, 71; Rhamnose, C. and G. Tanret, 71; Mixture Crystals of  $HgI_2$  with  $HgBr_2$ , Dr. W. Reinders, 71; Production of Indigo from Wood, Prof. Beyerling, 71; on the Blue Colour in Wood, Dr. Charles B. Plowright, 331, 563; Traité élémentaire de Mécanique Chimique fondée sur la Thermodynamique, P. Duham, Prof. G. H. Bryan, F.R.S., 73; Death of Prof. Ferdinand Tiemann, 84; Obituary Notice of, 133; the Hurter Memorial Lecture, Prof. G. Lunge, 92; Action of Acetylene on Metallic Oxides, F. A. Gooch and D. Baldwin, 93; Wiedemann's Annalen (now Annalen der Physik), 93, 190, 262, 432, 554, 626; Chemical Society, 94, 119, 190, 264, 335, 405, 434, 505, 530, 627; the Theory of Saponification, J. Lewkowitsch, 94; Action of Dilute Nitric Acid on Oleic and Elaidic Acids, F. G. Edmed, 94; Formation of Tetrazoline, S. Ruhemann and H. E. Stapleton, 94; Asymmetric Optically Active Nitrogen Compounds, W. J. Pope and S. J. Peachey, 94, 96; Camphoroxime, M. O. Forster, 94; Electrolytic Preparation of Induline Dyes, E. C. Szarvasy, 94; Action of Sulphuric Acid on Fenchone, J. E. Marsh, 94; Atomic Weight of Metal in Radio-active Barium Chloride, Mme. S. Curie, 96; the Crystallised Phosphides of Strontium and Barium, A. Jaboin, 96; Estimation of Phosphorus in Organic Compounds, Ch. Marie, 96; Absorption of Iodine by Plants, P. Bourcet, 96; Inorganic Chemical Preparations, Felix Lengfeld, 101; Japaconitine, W. R. Dunstan and H. M. Read, 119; Solid Ammonium Cyanate, J. Walker and J. K. Wood, 119; Amarine and Isoamarine, F. R. Japp and J. Moir, 119; Atomic Weight of Nitrogen, G. Dean, 119; Action of Fluorine and Hydrofluoric Acid on Glass, Henri Moissan, 119; Chemical Effects of Becquerel Rays, M. and Mme. Curie, 120; Reciprocal Displacement of Metals, Albert Colson, 120; Action of Nitric Oxide on Chromic Dichlorhydrin, V. Thomas, 120; a Methylene Sulphate, Marcel Delépine, 120; Mode of Synthesis of Parabanic Acid, P. Cazeneuve, 120; Memoirs and Correspondence of Lyon Playfair, First Lord Playfair of St. Andrews, LL.D., F.R.S., Sir Wemyss Reid, 121; Inorganic Chemistry for Advanced Students, Sir Henry E. Roscoe, F.R.S., and Arthur Harden, 125; Elementary Practical Chemistry, A. J. Cooper, 126; Chemical Action of Röntgen Rays, P. Villard, 143; Interaction of Hydrogen and Silver Chloride, M. Jouniaux, 143; Camphenylene, E. E. Blaise and G. Blanc, 144;

Colouring Matter of Digitalis, MM. Adrian and A. Trillart, 144; the Explosion of Potassium Chlorate, Daniel Berthelot, 166; Dissociation of Potassium and Ammonium Iodomercurate by Water, Maurice François, 167; Preparation of Tetrachloro- and Tetrabromo-orthoquinones, H. Cousin, 167; Descriptive General Chemistry, S. E. Tilman, 175; Dairy Chemistry: a Practical Handbook for Dairy Chemists and others having Control of Dairies, H. Droop Richmond, 176; the Elements of Blowpipe Analysis, Frederick Hutton Getman, 176; Death and Obituary Notice of E. C. Stanford, 184; Recent Researches on Uric Acid, Prof. Emil Fischer, 187; Oxalacetic Acid, H. J. H. Fenton and H. O. Jones, 190; Constitution of Fatty Acids (ii.), A. W. Crossley and H. R. Le Sueur, 190; Reaction between Sulphuric Acid and Potassium Ferrocyanide, R. H. Adie and K. C. Brown, 190; Sulphates of Bismuth, R. H. Adie, 190; Sulphates of Form  $R_2SO_2MSO_4$ , F. R. Mallet, 190; the Preparation of Benzeneazoorthonitrophenol, J. T. Hewitt, 190; General Method for Estimating some Elements in Organic Compounds, Daniel Berthelot, 192; Action of Aluminium Chloride on Camphoric Anhydride, G. Blanc, 192; Alkalimetry of Amines, A. Astruc, 192; Death and Obituary Notice of Paul Knuth, 205; Researches in Sugar Group, H. J. H. Fenton and H. Jackson, 215; Acetylene Derivatives, Dr. E. H. Keiser, 215; Aniline Dye Tests for Glucose, Dr. K. Bremer, 215; *d*-Sorbinose and *l*-Sorbinose, Prof. L. de Bruyn and W. A. van Ekenstein, 216; Action of Sodium Mono- and Disulphides on Aromatic Nitro-compounds, J. J. Blanksma, 216; Beginselen der Scheikunde, Dr. M. C. Schuyten, 220; Handbook of Physics and Chemistry, H. E. Corbin and A. M. Stewart, 221; Constitution of Fulminates, Dr. R. Scholl, 236; Molybdenum Silicide, E. Vigouroux, 239; Molybdenum Disulphide, Marcel Guichard, 239; Cacodylic Acid, Henri Hibbert, 239; Anhydrous Sesquichlorides of Rhodium and Iridium, E. Leidie, 239; Biochemical Oxidation of Propylglycol, André Kling, 239; Preparation of Carbazides, P. Cazeneuve and M. Moreau, 239; Combinations of Lithium Chloride with Ethylamine, J. Bonnefoi, 239; Estimation of Halogens in Organic Compounds, Amand Valeur, 239; the Tautomerism of Benzoylbenzoic Acid, A. Haller and A. Guyot, 239; Anleitung zur Darstellung Chemischer Präparate, Ein Leitfaden für den praktischen Unterricht in der Anorganischen Chemie, Prof. Dr. H. Erdmann, 246; Solubility of Argon and Helium in Water, Dr. T. Estreicher, 260; Rotatory Powers of Aromatic Hydrocarbons, W. H. Perkin, sen., 264; Formation of  $\alpha$ - and  $\beta$ -Acrose from Glycolic Aldehyde, H. Jackson, 264; Interaction of Mercurous Nitrite and Ethyl Iodide, P. C. Rây, 264; Action of Alkyl Iodides on Fatty Mercuric Iodide Sulphides, S. Smiles, 264; Brasilin and Haematoxilin, III., A. W. Gilbody and W. H. Perkin, jun., 264; Action of Alcoholic Potash on Monobromoglutaric Ester, N. E. Bowtell and W. H. Perkin, jun., 264; Action of Chloroform and Potassium Hydroxide on Orthoamidobenzoic Acid, W. J. Elliott, 264; Indicators and Test Papers, Alfred I. Cohn, 269; Optical Activity and Chemical Composition, Dr. H. Landolt, 269; Vapour-density of Bromine at High Temperatures, E. P. Perman and G. A. S. Atkinson, 285; Manganic Oxidation of Citric and Malic Acids, G. Denigès, 287; Amines containing Camphor Ring, G. Blanc, 287; Allotropy of Benzophenone, C. de Coninck, 287; Soluble Ferments produced during Germination of Seeds with Horny Albumen, Em. Bourquelot and H. Hérissey, 287; the Rhodio-cyanides, E. Leidie, 288; New Micro-chemical Reactions of Copper, M. Pozzi-Escot, 288; Leçons de Chimie Physique, J. H. van't Hoff, 294; Products of Explosion of Acetylene, W. G. Mixer, 310; Constitution of Ammonium-magnesium Arsenate of Analysis, Martha Austin, 310; Discharge of Electrified Bodies and Ozone Formation, P. Villard, 311; Electrolysis of Potassium Chloride, A. Brochet, 312; New Crystallised Molybdenum Sulphide, Marcel Guichard, 312; the van't Hoff Celebration at Rotterdam, Dr. H. M. Dawson, 321; Studies of Tin, MM. Cohen and van Eijk, 330; Electrolysis of Nitrogen Hydrides and Hydroxylamine, E. C. Szarvasy, 335; Action of Fuming Nitric Acid on  $\alpha$ -dibromocamphor, E. M. Chapman and A. Lapworth, 335; Substituted Hydroxytriazoles, G. Young and E. Witham, 335; Mixture of Dry Silver Oxide and Alkyl Halides as Alkylating Agent, G. D. Lander, 335; New Method of determining Aluminium, Alfred Stock, 336; the Metallic Borates, L. Ouvrard, 336; Borates of Magnesium Series, L. Ouvrard, 384; a

Crystall  
and So  
Referen  
F.R.S.  
Berthel  
355;  
F. H.  
of Mer  
on Ace  
pyrom  
Hydro  
Soluti  
384;  
390;  
Edger  
H. E.  
Sulph  
Pope  
405;  
Penta  
jun.,  
and  
Hall  
phor  
Sanc  
Nitr  
Abe  
Che  
412;  
C.  
Jap  
Mol  
Ans  
Est  
Bro  
Ma  
mo  
di  
E.  
St  
E.  
W.  
Ca  
Ar  
H  
J.  
A.  
4;  
L  
E  
C  
N  
P  
P  
I  
4

Crystallised Fibrin, L. Maillard, 336; the Letters of Faraday and Schönbein 1836-1862, with Notes, Comments and References to Contemporary Letters, Prof. R. Meldola, F.R.S., 337; the Formula of Hyposulphurous Acid, Herr Bernthsen, 354; Exact Atomic Weight of Nitrogen, G. Dean, 355; Gold Aluminium Alloys, C. T. Heycock, F.R.S., and F. H. Neville, F.R.S., 357; Detection of Silver in presence of Mercury Amido-chloride, F. Leteur, 360; Action of Copper on Acetylene, Paul Sabatier and T. B. Senderens, 360; Isopyromucic Acid, L. J. Simon, 360; Volumetric Estimation of Hydrogen, Alb. Colson, 384; Action of Strong Ammonia Solution on Iodide of Mercurdiammonium, Maurice François, 384; Equilibre des Systèmes Chimiques, J. Willard Gibbs, 390; the Homogeneity of Tellurium, Messrs. Norris, Fay and Edgerley, 402; Heterocyclic Compounds, S. Ruhemann and H. E. Stapleton, 405; Methyleneethylthine Dextrocampa Sulphonate and Dextro- $\alpha$ -bromo-campa Sulphonate, W. J. Pope and S. J. Peachey, 405; Nitrocamphane, M. O. Forster, 405; Isoamarine, F. R. Japp and J. Moir, 405; Ethyl Pentanehexacarboxylate, J. F. Bottomley and W. H. Perkin, jun., 405; Volumetric Estimation of Potassium, R. H. Adie and T. B. Wood, 405; Synthesis of Camphoric Acid, A. Haller and G. Blanc, 407; Synthesis of Phorone of Camphoric Acid, L. Bouveault, 407; Composition of East Indian Sandal Wood Essence, M. Guerbet, 407; Transformation of Nitrobenzene into Aniline by Horse-kidney Ferment, E. Abelous and E. Gérard, 407; Laboratory Note book for Chemical Students, Prof. Vivian B. Lewes and J. S. S. Brame, 412; Untersuchungen über die Chemischen Affinitäten, C. M. Guldberg and P. Waage, 412; Chemical Industry in Japan, 421; Advancement of Electrical Chemistry, Dr. F. Mollwo Perkin, 428; Action of Ammonium Chloride on Analcite and Leucite, F. W. Clarke and G. Steiger, 432; Estimation of Thallium as Acid and Neutral Sulphate, P. E. Browning, 432; Ammonium Amidosulphite, E. Divers and Masataka Ogawa, 434; Products obtained by Heating Ammonium Sulphites, Thiosulphate and Trithionate, E. Divers and Masataka Ogawa, 434; Colour of Alkali Nitrites, E. Divers, 434; Combination of Sulphur Dioxide with Oxygen, E. J. Russell and N. Smith, 434; Influence of "Nascent State" in Combination of Dry Carbon Monoxide and Oxygen, E. J. Russell, 434; Dextromethylene-*n*-propyl Tin Iodide, W. J. Pope and S. J. Peachey, 434; Bromo-derivatives of Campho-pyric Acid, J. A. Gardner, 434; Preparation of Arsenides, &c., P. Lebeau, 435; Iodide of Nitrogen, C. Hugot, 435; Resolution of Racemic Benzylidene Camphor, J. Minguin, 435; Rapid Method for determining Carbonic Acid in Gaseous Mixtures, Leo Vignon and Louis Meunier, 435; Volumetric Estimation of Boric Acid, Alfred Stock, 435; Elementary Chemistry for High Schools and Academies, Albert L. Arey, 442; A Manual of Chemistry, Inorganic and Organic, Dr. Arthur P. Luff and Frederick J. M. Page, 442; New Iodide of Nitrogen, Prof. Hantzsch, 453; the Osmotic Pressure Analogy, Prof. Leffeldt, 453; Pyrrol-aldehyde, Herren Bamberger and Djerdjian, 453; Relative Effusion Rates of Argon, Helium and other Gases, Dr. F. G. Donnan, 457; the Distillation of Liquid Air, E. C. C. Baly, 457; Uses of Liquid Air for Researches at Low Temperatures, Prof. Ramsay, 458; Composition of Hydrofluoric Acid by Volume, Henri Moissan, 459; Association of Molecules in Liquids, Daniel Berthelot, 459; Oxidation by Ferricyanides, A. Etard, 459; Estimation of Ammonia and Nitrogen, A. Villiers and E. Dumesnil, 459; Chemical Equilibrium of a Four-gas System, H. Pélabon, 459; Contaminated Lyons Well-waters, H. Causse, 459; New Colour reaction of Tyrosine, G. Deniges, 459; Les Sucres et leurs principaux Dérivés, Prof. L. Maquenne, Prof. R. Meldola, F.R.S., 461; Death of Dr. W. Marcet, F.R.S., 475; Death of William Thorpe, 475; New Gas Furnace, Armand Gautier, 478; New Fluoride of Manganese, Henri Moissan, 478; a Pure Proteid from Egg-white, F. G. Hopkins, 482; Iodine in New South Wales Copper Ores, Arthur Dieseldorff, 483; Action of Silver Salts on Solution of Ammonium Persulphate, Dr. Hugh Marshall, 483; Magnesium Perfluoride, Henri Moissan, 483; Phosphides of Iron, Nickel, Cobalt and Chromium, G. Maron-neau, 483; Eugenol, Safrol and Propylpyrocatechol, R. Delange, 483; Diazotising of Safranin, G. F. Jaubert, 483; Leitfaden für den Unterricht in der Anorganischen Chemie, Dr. Sperber, 489; Aufgaben aus der Chemie und der physikalischen Chemie, Dr. P. Bräuer, 489; Jaborine, H. A. D.

Jowett, 505; Isomeric partially Racemic Salts containing Quinquevalent Nitrogen, F. S. Kipping, 505; New Syntheses of Indene, F. S. Kipping and H. Hall, 505, 547; Non-existence of Dihydroxylamine Derivatives of Potassium Nitrite, E. Divers and T. Haga, 505; Acids obtained from  $\alpha$ -dibromocamphor, A. Lapworth and E. M. Chapman, 505; Campholytic and Isolaunonic Acids, J. Walker and W. Cormack, 505; Iodonium Compounds, F. S. Kipping and H. Peters, 506; Decomposition of Semicarbazones, F. S. Kipping, 506; Production of Nitric Acid from Air by Electric Flame, A. McDougall and F. Howles, 507; New Reaction between Aromatic Aldehydes and Sodium Derivative of Borneol, A. Haller, 507; Action of Hydrogen Peroxide on Baryta, M. de Forcrand, 508; Electrolysis of Potassium Chloride, H. A. Brochet, 508; Solubility of Benzophenone, E. Derrien, 508; Acetals of Phenols, R. Fosse, 508; Practical Chemistry, William French, 514; an Introduction to Qualitative Analysis, H. P. Highton, 514; Vapour Densities of Dried Mercury and Mercurous Chloride, H. B. Baker, 530; Pure Hydrobromic Acid, A. Scott, 530; New Sulphide of Arsenic, A. Scott, 530; Action of Iodine on Alkalis, R. L. Taylor, 530; Sym-dipropyl, Sym-di-isopropyl and *aa'*-propylisopropyl-succinic Acids, W. A. Bone and C. H. G. Sprankling, 530; Manno-galactan and Lævulo-mannan, J. L. Baker and T. H. Pope, 530; Dissociation Constant of Azoimide, C. A. West, 530; Racemisation during Formation of Benzylidene, Benzoyl, and Acetyl Derivatives of Dextro-tetrahydro- $\beta$ -Naphthylamine, W. J. Pope and A. W. Harvey, 530; Determination of Radicles in Carbon Compounds, Dr. H. Meyer, 538; Death and Obituary Notice of Prof. Pepper, 545; No Isomerism in Sodium Potassium Sulphide, Dr. Fraps, 547; Modern Explosives, J. S. S. Brame, 548; Solubility of Carbonic Acid at Low Temperatures, C. Bohr, 554; Hexagonal Form of Selenide of Zinc, M. Fonzes-Diacon, 556; New Compound of Antipyrin and Mercuric Chloride, J. Ville and Ch. Astre, 556; Science Course for Secondary Schools, G. Robb and J. Mirguet, 562; Produits Aromatiques, Artificiels et Naturels, Dr. G. F. Jaubert, 563; the Velocity Change of White into Grey Tin, Dr. Cohen, 573; Action of Hydrogen on Antimony Sulphide, H. Pelabon, 580; an Arsenide of Nickel, Albert Granger and Gaston Didier, 580; Biphosphide of Tungsten, Ed. Defaqs, 580; a New Terpenic Alcohol and its Derivatives, P. Genèvre, 580; Action of Phenyl Isocyanate and Isothiocyanate on Dibasic Acids, Elophe Bénéch, 580; Enantiotropy of Tin, *iv*, Dr. Ernst Cohen, 580; the Carburetted Water-gas Industry, Samuel Cutler, jun., 595; Heat of Formation of Hydrated and Anhydrous Strontium Dioxide, M. de Forcrand, 604; a New Method of Fractionating Rare Earths, Eugene Demarçay, 604; Monomercurammonium Iodide, Maurice François, 604; a Crystalline Selenide and Oxyselelide of Manganese, M. Fonzes-Diacon, 604; Reducing Action of Calcium Carbide, M. Geelmuyden, 604; New Method for Preparation of Double Sulphates of Chromium, C. Pagel, 604; Electrolytic Estimation of Lead in Lead Sulphate and Chromate, C. Marie, 604; *aa* $\beta$ -trimethyl- $\beta$ -oxyadipic Acid, E. E. Blaise, 604; Action of Amyl Chloride on Calcium Carbide, P. Lefebvre, 604; Chemistry of Perfumes, Dr. W. H. Warren, 619; New Reactions of Formaldehyde, M. Henry, 621; Hydrolysis of Raffinose by *Penicillium glaucum*, M. Gillot, 621; Liquefaction of a Gas by Self-cooling, G. S. Newth, 627; the Decomposition of Lead Chlorate, W. H. Sodeau, 627; Salinigrin, H. A. D. Jowett, 627; Alkylation by means of Dry Silver Oxide and Alkyl Iodides, G. D. Lander, 627; Interaction of Mesityl Oxide and Ethyl Sodiomethylmalonate, A. W. Crossley, 627; New Micro-chemical Reaction of Palladium, MM. Pozzi-Escot and Conquet, 628; Agricultural Chemistry: Progress of Agricultural Chemistry, Prof. Maercker, 116; the Wheat Problem, Sir William Crookes, F.R.S., Sir R. Giffen, K.C.B., F.R.S., 169  
Chevallier (H.), Variation of Electrical Resistance of Metallic Wires, 311  
Chevreton (G.), Exercices d'Arithmétique, 314  
Cheyne (Rev. T. K.), Encyclopædia Biblica, 148  
Cheyne (Prof. W. Watson), a Manual of Surgical Treatment, 176  
Chicago Drainage Canal, the, 353  
Children, the Diseases of, G. Elder and J. S. Fowler, 5  
Chile, Temperate, a Progressive Spain, W. Anderson Smith, Dr. Hugh Robert Mill, 536

- China: Cina e Giappone, E. von Hesse Warteg, 513; Crab Ravages in China, Kumagusu Minakata, 491  
 Chisholm (George G.), the Geography of Europe, 368  
 Chree (Dr. C., F.R.S.), Vector Diagrams, 490  
 Christiansen (C.), Origin of Frictional Electricity, 190  
 Christison (Dr. J. Sanderson), Brain in Relation to Mind, 295  
 Christmas Island, on the Relation of, to the Neighbouring Lands, C. W. Andrews, 19  
 Chronologie des Temps préhistoriques, Essai de, M. Roisel, 514  
 Chronometer, Microphonic Registration of Beat of, A. Berget, 71  
 Chun (Prof.), Light-collecting Apparatus of Deep-sea Fish, 65  
 Cidre, Le, X. Rocques, 342  
 Cina e Giappone, E. von Hesse Wartegg, 513  
 Citeri (C.), Seconda Spedizione Bottego. L'Omo. Viaggio d'Esplorazione nell'Africa Orientale, 75  
 Clarke (F. W.), Action of Ammonium Chloride on Analcite and Leucite, 432  
 Classified Dates, Cyclopaedia of, Charles E. Little, 513  
 Clayden Effect, on the Cause of Dark Lightning and the, Prof. R. W. Wood, 104  
 Claypole (Prof. E. W.), Californian Earthquake of December 25, 1899, 595  
 Clayton (H. H.), Recent Exploration in Upper Air and its bearing on Theory of Cyclones, 611  
 Clinch (George), Drift Gravels at West Wickham, 191  
 Close Double Stars, Density of, 306  
 Coal and Coal Mining, a Rudimentary Treatise on, Sir Warrington W. Smyth, F.R.S., Bennett H. Brough, 411  
 Coaling at Sea, the Problem of, 430  
 Cobbold (Ralph P.), Innermost Asia, 495  
 Coccidæ of New Zealand, the, Prof. T. D. A. Cockerell, 367  
 Coccospheres and Rhabdospheres, George Murray, F.R.S., 54  
 Cockerell (Prof. T. D. A.), the Coccidæ of New Zealand, 367  
 Cockle, the Common, J. Johnstone, 372  
 Cockroaches, Australian Remedy for, 520  
 Coffey (G.), on Irish Copper Celts, 43  
 Cohen (Dr.), Physico-chemical Studies of Tin, 330; the Velocity Change of White into Grey Tin, 573; Enantiotropy of Tin, iv., 580  
 Cohn (Alfred I.), Indicators and Test Papers, 269  
 Cohn (Rudolf), Base obtained by Action of Hydrochloric Acid on Albumen, 65  
 Cole (Prof. G. A. J.), Metamorphic Rocks in Tyrone and Donegal, 407  
 Collins (Henry F.), the Metallurgy of Lead and Silver, 198  
 Colour Chemistry: L'Industrie des Matières Colorantes Azoïques, George F. Jaubert, 53  
 Colour of Flints, the, W. H. Wheeler, 106  
 Colour of Horses for Service in Hot Countries, Captain M. H. Hayes, 445  
 Colour in Nature: a Study in Biology, Marion J. Newbigin, 217  
 Colour in Wood, on the Blue, Dr. Charles B. Plowright, 331, 563  
 Colour Physiology of *Hippolyte varians*, the, F. W. Keeble and F. W. Gamble, 552  
 Colours, Floral, Experiments on the, P. Q. Keegan, 105  
 Colours, Cause of Recent Sunset, Horace Darwin, 128  
 Colson (Alb.), Reciprocal Displacement of Metals, 120; Volumetric Estimation of Hydrogen, 384  
 Columbia, British, Fifteen Years' Sport and Life in the Hunting-grounds of Western America and, W. A. Baillie-Grohman, 566  
 Comets: Comet Giacobini (1899 e), 17, 41, 87, 114, 137; M. Perronin, 47; Comet Giacobini (1900 a), 355, 402, 424; Holmes' Comet (1899 d), 17, 41, 62, 87, 114, 137; Holmes' Comet (1899 II.), 236; the Meteors of Biela's Comet, E. C. Willis, 78; W. F. Denning, 78; Refraction Effect of Comet Swift (1899 I.), Prof. C. D. Perrine, 87; Definitive Orbit of Comet 1897 III., Herr E. Wessel, 374; Comet 1899 V., 501, 521  
 Compass, the Evoy, 398  
 Compensation in Weather, Alex. B. MacDowall, 295  
 Computation of Occultations, the, 355  
 Computation of Orbits of Spectroscopic Doubles, Dr. K. Schwarzschild, 521  
 Commerce, Essais du, et de l'Industrie, L. Cuniasse and R. Zwilling, 176  
 Concave Diffraction Grating, new Mode of Using, Dr. G. B. Rizzo, 501, 541  
 Conference of German Men of Science at Munich, the, 62  
 Coniferen, Ueber den Habitus der, Dr. A. H. Burt, 28  
 Coninck (E. de), Allotropy of Benzophenone, 287  
 Conquet (H. C.), New Micro-chemical Reaction of Palladium, 628  
 Constantin (M.), a New Pathogenic Mucor, 192  
 Contact Electricity, 332  
 Contemporary Meteor-showers of the Leonid and Bielid Meteor-periods, Prof. A. S. Herschel, F.R.S., 222, 271  
 Cook (Dr. F. A.), the Possibilities of Antarctic Exploration, 136; Geographical Results of Belgian Antarctic Expedition, 258  
 Cook (S. R.), Escape of Gases from Planetary Atmospheres, 501  
 Cooke (W. E.), Position of Perth Observatory, 114  
 Cooper (A. J.), Elementary Practical Chemistry, 126  
 Copper, the Production of Electrolytic, Charles H. Lees, 392  
 Coppock (John B.), Volumetric Analysis, 317  
 Corals: the Structure of Porites, H. M. Bernard, 213; Ancestry of Helioporidæ (Blue Coral), Prof. J. W. Gregory, 311, 555; Corals in the Pacific, A. Agassiz, 432  
 Corbin (H. E.), Handbook of Physics and Chemistry, 221  
 Corbino (Dr. O. Mc), Wehnelt's Interrupter, 328  
 Cormack (W.), Campholytic and Isolauroic Acids, 505  
 Corn, Indian, Kumagusu Minakata, 392, 515; W. F. Sinclair, 445  
 Corney (Dr.), Edible Earth from Fiji, 484  
 Cornish (Vaughan), on the Sand-dunes bordering the Delta of the Nile, dealing with the Ripples, Sand-dunes and Dune-tracts in turn, 20; on Desert Sand-dunes bordering the Nile Delta, 403  
 Cornu (A.), Law of Diurnal Rotation of Optical Field of Siderostat and Heliostat, 459  
 Corona, the Structure of the Inner, Prof. S. P. Langley, For.M.R.S., 443  
 Corresponding Societies of the British Association, 115; Rev. J. R. Stebbing on the Living Subterranean Fauna of Great Britain and Ireland, 116  
 Cory (C. B.), the Birds of Eastern North America—Water-Birds, 323  
 Cosmosphere, Blackie's, 359  
 Cotton (A.), Le Phénomène de Zeeman, 270  
 Coues (Dr. Elliott), Obituary Notice of, 278  
 Coulter (John), Plant Relations: a First Book of Botany, 442  
 Coupin (Henri), Toxic Effects of Compounds of Alkaline Earths on Plants, 532  
 Cousin (H.), Preparation of Tetra-chloro- and Tetra-bromo-orthoquinones, 167  
 Cowper-Coles (S.), Some Recent Applications of Electrometallurgy to Mechanical Engineering, 21; Improvements in Production of Electrolytic Copper, 371  
 Coxwell (H. T.), Death and Obituary Notice of, 257  
 Crab Ravages in China, Kumagusu Minakata, 491  
 Cragin (Belle S.), Our Insect Friends and Foes: how to Collect, Preserve and Study them, 342  
 Craniology, New Graphical System of, P. H. Eykman, 408  
 Crawford (R. F.), Comparative Dietery of Great Britain, Belgium, France and Germany, 520  
 Creation, the Witness of; Nature Sketches from the Book of Job, M. Cordelia Leigh, 466  
 Creighton (Charles), Microscopic Researches on Glycogen, Part II., 586  
 Crew (Henry), Elements of Physics, 27  
 Crooke (W.), on the Primitive Rites of Disposal of the Dead, as Illustrated by Survivals in Modern India, 44  
 Crookes (Sir William, K.C.B., F.R.S.), the Wheat Problem, 169  
 Crommelin (Mr.), a Brilliant Fireball, 548  
 Crompton (C.), the Fitting of the Cycle to its Rider, 87  
 Crompton (R. E.), the Fitting of the Cycle to its Rider, 87, 391  
 Crossley (A. W.), Constitution of Fatty Acids, II., 190; Interaction of Mesityl Oxide and Ethyl Sodiomethylmalonate, 627  
 Cruls (L.), Formula for Atmospheric Refraction, 621  
 Crustacea: Crab Ravages in China, Kumagusu Minakata, 491  
 Crystallography: New Three-circle Goniometer, G. H. F. Smith, 113; Darstellung der 32 Möglichen Krystallklassen, Prof. H. Baumhauer, 245; a Category of Crystalline Groups Escaping Optical Investigation, F. Wallerant, 312; Non-existence of Hexagonal System, F. Wallerant, 360; a Treatise on Crystallography, W. J. Lewis, Prof. H. A. Miers, F.R.S., 485; Tyndall's Ice Crystals, 890

- Cuniasse (L.), *Essais du Commerce et de l'Industrie*, 176  
 Cunynghame (Henry), *Theory and Practice of Art Enamelling upon Metals*, 466  
 Curie (P.), Action of Magnetic Field on Becquerel Rays, 287;  
 Negative Electrification of Secondary Rays produced by means of Röntgen Rays, 604  
 Curie (M. and Mme.), Radio-activity Induced by Becquerel Rays, 71; Chemical Effects of Becquerel Rays, 120; Electric Charge of Deviable Radium Rays, 483  
 Curie (Mme. S.), Atomic Weight of Metals in Radio-active Barium Chloride, 96; Penetration of Becquerel Rays which are not Deviable in Magnetic Field, 287  
 Current Papers, H. C. Russell, F.R.S., 167  
 Cartel (Georges), Physiological Phenomena of Chlorosis in Vine, 628  
 Curtis (R. H.), Diurnal Variation of Barometer in British Isles, 119  
 Cutler (Samuel, jun.), the Carburetted Water-gas Industry, 595  
 Cycle, the Fitting of the, to its Rider, R. E. Crompton, 87, 391; C. Crompton, 87; D. E. Hutchins, 368; Wm. H. Massey, 391  
 Cyclones: Dynamics of Cyclones, John Aitken, F.R.S., 531; Recent Exploration in Upper Air and its Bearing on Theory of Cyclones, H. H. Clayton, 611  
 Cyclopaedia of Classified Dates, Charles E. Little, 513  
 Cygni, Spectrum of, Herr A. Belopolsky, 137  
 Y Cygni, Elliptic Elements of the Variable, Prof. N. C. Dunér, 574  
 Cygnus, New Algol Variable in, 17  
 Cygnus, New Variable in, 501  
 Cyon (E. de), the Orientation of the "Homing" Pigeon, 596  
 Cyprus Museum, a Catalogue of the, with a Chronicle of Excavations undertaken since the British Occupation, and Introductory Notes on Cypriote Archaeology, John L. Myres and Max Ohnefalsch-Richter, 195  
 Cytology: Fixierung, Färbung, und Bau des Protoplasmas, Kritische Untersuchungen ueber Technik und Theorie in der Neueren Zellforschung, Dr. Alfred Fischer, Prof. J. B. Farmer, 385  
 Dairy Chemistry: a Practical Handbook for Dairy Chemists and others having Control of Dairies, H. Droop Richmond, 176  
 Dalby (Prof. W. E.), a Friction Dynamometer, 165  
 Dale (Miss E.), on Intumescences of *Hibiscus vitifolius*, 68, 165  
 Dallmeyer (Thomas R.), Telephotography, 315  
 Dalrymple-Hay (H. H.), Method of Construction of Waterloo and City Railway, 85  
 Dana (James Dwight), the Life of, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, Daniel C. Gilman, Prof. John W. Judd, C.B., F.R.S., 409  
 Daniel (Lucien), Self-grafting of Monocotyledons, 24; Variations in Haricots under Grafting, 483  
 Danilewsky's Dirigible Balloon, 372  
 Darjeeling Landslips, the Cause of the, T. H. Holland, 127  
 Dark Lightning Flashes, Dr. W. Ainslie Hollis, 7; Dr. William J. S. Lockyer, 7; on the Cause of Dark Lightning and the Clayden Effect, Prof. R. W. Wood, 104  
 Darwin (Francis), Investigations on the Localisation of the Irritability in Geotropic Organs, 67; Experiments on Periodic Movement of Plants, 359  
 Darwin (Horace), Cause of Recent Sunset Colours, 128  
 Darwin (Major), Antarctic Exploration, 19  
 Dates, Cyclopaedia of Classified, Charles E. Little, 513  
 Davenport (C. B.), Statistical Methods, with special reference to Biological Variation, 149; Experimental Morphology, 218  
 David (Prof. T. W. E.), Glaciated Pebbles in Lochinvar (N.S.W.) Permo-Carboniferous Coalfield, 167; Underground Temperature, 484; Edible Earth from Fiji, 484  
 Davis (Prof. W. M.), Physical Geography, 266  
 Davison (Dr. Charles), Note on Distances to which Explosions are felt and heard, 91; Earthquake-sounds, 329; British Earthquakes, 1893-9, 546  
 Dawson (Dr. H. M.), the van 't Hoff Celebration at Rotterdam, 321  
 Dawson (Sir J. William, LL.D., F.R.S.), Death and Obituary Notice of, 80  
 Dawson (Maria), Nitrugin and the Nodules of Leguminous Plants, 405  
 Dawson (W. B.), Remarkable Secondary Tidal Undulations, 619  
 Daylight Leonids, Supposed, W. F. Denning, 152  
 Deacon (O. D.), Remarkable Hailstorm in Cape Colony, 594  
 Deaf in America, Marriages of the, Edward Allen Fay, Dr. Macleod Gearsley, 97  
 Dean (G.), Atomic Weight of Nitrogen, 119; Exact Atomic Weight of Nitrogen, 355  
 Deane (H.), Suggestions for Diagrammatical Depicture of Seasons of Drought and Rainfall, 47  
 Debiere (A.), Actinium Rays, 573, 580  
 Deceptive Bibliographic Indications, F. A. Bather, 367  
 Deep-sea Soundings, Atlantic, R. E. Peake and Sir John Murray, 286  
 Deep-sea Soundings in the Pacific, Results of, Prof. Alexander Agassiz, 211  
 Defacqz (E.), Biphosphide of Tungsten, 580  
 Definitive Orbit of Comet 1897 III., Herr E. Wessell, 374  
 Déhérain (P. P.), the Culture of White Lupins, 287; Culture of Blue Lupins, 435  
 Delacroix (M.), the Antibes Carnation Disease, 95; a Caucasian Vine Disease, 383  
 Delage (Yves), Merogenic Impregnation, 24; Experimental Study of Fertilisation, 551  
 Delange (R.), Eugenol, Safröl and Propylpyrocatechol, 483  
 Delépine (Marcel), a Methylene Sulphate, 120; Heat of Combustion of some very Volatile Liquids, 627  
 Delézinier (M.), Effect of Use of Triphase Currents in Radiography, 335  
 Demarcay (Eug.), Spectrum of Radium, 71; a New Method of Fractionating Rare Earths, 604  
 Demoussy (C.), the Culture of White Lupins, 287  
 Demoussy (E.), Culture of Blue Lupins, 435  
 Dendy (Prof. Arthur), a New Peripatus from New Zealand, 444  
 Deniges (G.), Manganic Oxidation of Citric and Malic Acids, 287; New Colour Reaction of Tyrosine, 459  
 Deniker (J.), the Races of Man: an Outline of Anthropology and Ethnography, 462  
 Denning (W. F.), the Meteors of Biela's Comet, 78; the Leonids, 81; Supposed Daylight Leonids, 152; Mercury as a Naked Eye Object, 431  
 Density of Close Double Stars, 306  
 Derrien (E.), Solubility of Benzophenone, 508  
 Descriptive General Chemistry, S. E. Tilman, 175  
 Desert Sand-dunes Bordering the Nile Delta, on, Vaughan Cornish, 20, 403  
 Desgrez (A.), Transformation of Fat into Glycogen in Organism, 555  
 Deslandres (H.), Rapid Variations of Radial Velocity of  $\delta$ -Orion, 407  
 Dewar (Prof.), Experiments on the Influence of the Temperature of Liquid Hydrogen on the Germinative Power of Seeds, 67  
 Dexter (Prof. Edwin Grant), the Effect of Weather on Everyday Life, 56; Drunkenness and the Weather, 365  
 Dick (Dr. J. A.), the "Emerods" of the Bible Bubonic Plague, 501  
 Dickson (H. N.), Observations of Temperature of Water and Air round the British Islands, 19; Temperature and Salinity of the Surface Water of the North Atlantic during 1896 and 1897, 19; Mean Temperature of Sea-surface round British Coasts and its Relation to Air-temperature, 399  
 Dickson (Prof.), Proof of Galois Field of Order  $p^r$  for every integer  $r$  and prime number  $p$ , 554  
 Dictionary of the English Language, Students' Edition of a Standard, James C. Fernald, 220  
 Dictionary of the Lepcha Language, the, General G. B. Mainwaring, 442  
 Dictionary, Muret-Sanders' Encyclopaedic English-German and German-English, 610  
 Dictionary, Who's Who, 1900, an Annual Biographical, 270  
 Dictionnaire des Termes de Médecine, Français-Anglais, H. de Méric, 270  
 Didier (Gaston), an Arsenide of Nickel, 580  
 Diener (Dr. C.), Fundamental Structure-lines of Eastern Alps, 40  
 Dieseldorff (Arthur), Iodine in New South Wales Copper Ores, 483  
 Dietary, Comparative, of Great Britain, Belgium, France and Germany, R. F. Crawford, 520  
 Difficulties of the Calendar, the Date of Easter, W. T. Lynn, 493  
 Diffraction Grating, Concave, New Mode of Using, Dr. G. B. Rizzo, 501, 541

- Digestion, diminished Digestive Activity of Saliva in certain Diseases, Dr. W. G. A. Robertson, 531  
 Diplococus, a Skeleton of, H. F. Osborn, 534  
 Directory, the Englishwoman's Year-book and, 270  
 Disease, Atmospheric Electricity and, Dr. Schliep, Prof. John Perry, F.R.S., 471  
 Disease, Insects as Carriers of, Dr. G. H. F. Nuttall, 153  
 Diseases of Children, the, G. Elder and J. S. Fowler, 5  
 Diseases, Liverpool School of Tropical, 342  
 Distances to which Explosions are Felt and Heard, Note on, Dr. Charles Davison, 91  
 Distant (Mr.), Mimicry, 235  
 Distribution of Income, the, Prof. William Smart, Sir R. Giffen, F.R.S., 581  
 Divers (E.), Ammonium Amidodisulphite, 434; Products obtained by Heating Ammonia Sulphites, Chiosulphate and Trithionate, 434; Colour of Alkali Nitrites, 434; Non-existence of Dihydroxylamine Derivatives of Potassium Nitrite, 505  
 Divining Rod, the Theory of Water Finding by the, its History, Method, Utility and Practice, B. Tompkins, C. V. Boys, F.R.S., 1  
 Dixon (Dr. H. H.), First Mitosis of *Lilium* Spore-mother Cells, 191  
 Djerdjian (Herr), Pyrrol-aldehyde, 453  
 Dobbin (Leonard), Arithmetical Exercises in Chemistry, 53  
 Dollar (J. A. W.), a Surgical Operating Table for the Horse, 588  
 Dongier (R.), Polarised Light in Magnetic Field, 360  
 Donnan (Dr. F. G.), Relative Effusion Rates of Argon, Helium, and other Gases, 457  
 Donnelly (Major-General Sir J. F. D., K.C.B.), Testimonial to, 132  
 Doolittle (Prof. Eric), Secular Perturbations of Venus, 41  
 Dörge (O.), Soap-bubbles, 432  
 Double Stars, Density of Close, 306  
 Doumer (E.), Action of High-tension, High-frequency Currents on Tuberculosis, 459  
 Dowker (G.), on the Sand-dunes between Deal and Sandwich, with remarks on the Flora of the District, 68  
 Downing (Dr. A. M. W., F.R.S.), Next Week's Leonid Shower, 28  
 Draco, New Variable Star in, Dr. T. D. Anderson, 374  
 Dragon-flies, British, W. J. Lucas, 418  
 Drainage Canal, the Chicago, 353  
 Drainage, Mine, Stephen Michell, Prof. W. Galloway, 606  
 Dreams of a Spirit-Seer, Illustrated by Dreams of Metaphysics, Immanuel Kant, 563  
 Dreyer (Dr. J. L. E.), the Correspondence of Olbers and Gauss, 486  
 Drummond (Andrew T.), a Canadian Lake of Subterranean Inflow, 128  
 Drunkenness and the Weather, Prof. Edwin C. Dexter, 365; R. C. T. Evans, 469  
 Drygalski (Prof. Erich von), German Antarctic Expedition, 318  
 Duane (W.), Electrical Thermostat, 528  
 Dublin Royal Society, 191, 435  
 Duckworth (W. L. H.), Supernumerary Teeth, 482  
 Duerden (Mr.), Sea Fisheries of Jamaica, 157; Recent Changes in Jamaican Fauna, 157  
 Dufour (M.), Quartz Thermometers, 521, 531  
 Dufton (Dr. Arthur), to Calculate a Simple Table of Logarithms, 415  
 Duhem (Prof. P.), *Traité Élémentaire de Mécanique Chimique fondée sur la Thermodynamique*, 73  
 Duldén (Dr.), Researches in Camphor Series, 64  
 Dumesnil (E.), Estimation of Ammonia and Nitrogen, 459  
 Dunér (Prof.), Elliptic Elements of the Variable  $Y$  Cygni, 574  
 Dunstan (W. R.), Japaconitine, 119  
 Dust, Electric Light Wires and, A. A. C. Swinton, 612  
 Dutoit (Paul), Surface Tension of some Organic Liquids, 383  
 Dwarf Land, in, and Cannibal Country. A Record of Travel and Discovery in Central Africa, A. B. Lloyd, 314  
 Dyeing with Woad alone, on the Process of, Dr. Charles B. Plowright, 563  
 Dymchurch Sea-wall and the Reclamation of the Romney Marshes, on the, Edward Case, 22  
 Dynamics: Elementary Dynamics, W. M. Baker, 221; a First Book in Statics and Dynamics, Rev. J. R. Robinson, 365; *Abhandlung der Dynamik D'Alembert*, 390; *Ueber die Mathematische Theorie der Electrodynamischen Induction*, Ricardo Felici, 390; Dynamics of Cyclones, John Aitken, F.R.S., 531  
 Dynamite Explosions, Effects of Avigliana, Dr. M. Baratta, 451  
 Dynamometer, a Friction, Prof. W. E. Dalby, 165  
 Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193  
 Earl (Alfred), Elements of Natural Philosophy, 125  
 Earth, Edible, from Fiji, Dr. Corney, F. B. Guthrie and Prof. T. W. E. David, 484  
 Earth, Method of determining Mean Density of, Al. Gerschun, 192  
 Earth-knowledge, First Steps in, being an Introduction to Physiography, J. A. Harrison, 317  
 Earth-shine, 235  
 Earth's Motion, the Relation between the Periodic Changes of Solar Activity and the, Dr. J. Halm, 445  
 Earthquakes: Barisal Guns and, Prof. A. Issel, 60; Earthquake Sounds, Dr. C. Davison, 329; Earthquake in Tiflis, 256; at Smyrna, 302; in Venetia, 450  
 Easter, the Date of, Difficulties of the Calendar, W. T. Lynn, 493  
 Ebert (H.), Glow-light Phenomena with High-frequency Alternate Currents, 93  
 Echelon Film Gratings, Charles P. Butler, 275  
 Eckhardt (Herr), the Preparation of Metallic Caesium, 61  
 Eclipses: Partial Eclipse of the Moon, December 16, 158; the Wind during Eclipses of the Sun, John W. Evans, 200; A. L. Rotch, 589; the Approaching Total Eclipse of the Sun, 201; the Eclipse Expedition at Vizadurg, Sir Norman Lockyer, K.C.B., F.R.S., 229, 249; Solar Eclipses in the Twentieth Century, M. Camille Flammarion, 548; Photometric Observations of Mercury during Solar Eclipses, Dr. G. Müller, 574  
 Economic Science, Sir William Smart, Sir R. Giffen, F.R.S., 581  
 Economy: the Price of Wheat at Haddington, 1627-1897, R. C. Mossman, 519  
 Edgerley (M.), the Homogeneity of Tellurium, 402  
 Edible Earth from Fiji, Dr. Corney, F. B. Guthrie and Prof. T. W. E. David, 484  
 Edinburgh Mathematical Society, 166, 286, 435, 507  
 Edinburgh Royal Society, 166, 238, 286, 359, 482, 531, 579  
 Edmed (F. G.), Action of Dilute Nitric Acid on Oleic and Elaidic Acids, 94  
 Edser (Edwin), Heat for Advanced Students, 557  
 Education: the New Education, Manual Training: Woodwork, Richard Wake, 53; Rural Education: John C. Medd, 55; Prof. R. Meldola, F.R.S., 55; C. H. Bothamley, 55; Nature Study in Rural Schools, 553; the Utility of Knowledge-making as a Means of Liberal Training, Prof. J. G. Macgregor, 159; G. H. Wyatt, 274; the South-western Polytechnic, A. T. Simmons, 208; Science Teachers in Conference, 283; American Higher Technical Education, Prof. F. W. Burstall, 299; Agricultural Education, 332; Technical Instruction in Relation to Industrial Progress, Prof. W. Ripper, 356; Elementary Chemistry for High Schools and Academies, Albert L. Arey, 442; School Gardens, G. B. Smith, 455  
 Effect of Weather on Every-day Life, the, Edwin Grant Dexter, 56  
 Egleston (Prof. Thomas), Death of, 370  
 Egyptology: Recent Anthropometrical Work in Egypt, D. MacIver, 43; Flint Implements, &c., from Egypt, Prof. Flinders Petrie, 95; Books on Egypt and Chaldaea. Egyptian Ideas of the Future Life; Egyptian Magic, E. A. Wallis Budge, Frank Rede Fowke, 437  
 Einführung in die Chemie in leichtfasslicher Form, Prof. Dr. Lassar-Cohn, 51  
 Einthoven (Prof. W.), Theory of Capillary Electrometer, 72  
 Ekenstein (W. A. van), *d*-Sorbitose and *l*-Sorbitose, 216  
 Elder (G.), the Diseases of Children, 5  
 Election, the London University, 299, 324, 369; Rev. Dr. A. Irving, 318  
 Electricity: Analyses Électrolytiques, Ad. Minet, 5; Mr. Cooper-Coles on Some Recent Applications of Electrometallurgy to Mechanical Engineering, 21; Model illus-

trating Flow-actions of Current, Mr. Addenbrooke, 23; Experiments with Lecher's Wehnelt Interrupter, W. Watson, 23; Wehnelt's Interrupter, E. Rothé, 48; Dr. R. Federico, P. Bacci and O. M. Corbino, 328; the Various Patterns of Wehnelt Interrupter, Alfred Turpain, 407; Electrolytic Interrupter for Feeble Currents, A. von Rzewuski, 627; Death by the Electric Discharge, J. L. Prevost and F. Battelli, 24; Transmission of Hertzian Waves through Liquids, Edouard Branly, 47; Electrical Motive Power in Docks, Harbours and Canals, 60; the Course of Electrolytic Reduction, J. Tafel, 63; Contact Electricity, F. S. Spiers, 70; Theory of Capillary Electrometer, Prof. W. Einthoven, 72; the Niagara Power Station, 85; Electrical Equipment of Waterloo and City Railway, B. M. Jenkin, 85; Glow-light Phenomena with High-frequency Alternate Currents, H. Ebert, 93; Electric Pictures, L. Fomm, 93; the Macfarlane-Moore Vacuum Tube, J. Elster and H. Geitel, 93; Electrolytic Preparation of Induline Dyes, E. Szarvasy, 94; Conductivity of Gas near Incandescent Wire, J. A. McClelland, 95; Magnetism and Electricity, J. Paley Vorke, 102; on the Cause of Dark Lightning and the Clayden Effect, Prof. R. W. Wood, 104; Electro-magnets in Steel Works, 135; the Diurnal Variations of Atmospheric Electricity, A. B. Chauveau, 136; Electrical Thawing of Water Service Pipes, 156; Influence of Röntgen Rays on Resistance of Selenium, M. Perreau, 167; Negative Electrification of Secondary Rays produced by means of Röntgen Rays, P. Curie and G. Sagnac, 604; Marconi Wireless Telegraphy in U.S.A., 185; a History of Wireless Telegraphy, J. J. Fahie, 243; La Télégraphie sans Fil, André Broca, 243; Wireless Telegraphy between Chamounix and Mt. Blanc, Léon and Louis Lecarme, 280; Wireless Telegraphy in the War, 350; Use of new Radio-conductors for Wireless Telegraphy, C. Tissot, 579; Moving Bodies in Electric Field, A. Heydweiller, 190; Ratio of Electric Charge to Mass in Kathode Particles, S. Simon, 190; Origin of Frictional Electricity, C. Christiansen, 190; Influence of Becquerel Rays on Electric Sparks, J. Elster and H. Geitel, 190; Behaviour of Brush Discharge in Magnetic Field, M. Toepler, 190; Magnetism and Electricity for Beginners, H. E. Hadley, 200; Electrolytic Processes in Industry, Dr. W. Borchers, 206; Effects of Discharges on Heart of Mammals, J. L. Prevost and F. Battelli, 239; Constitution of Electric Spark, G. A. Hemsalech and Prof. Schuster, 258; Magnetic Deflection of Kathode Rays, E. Wiechert, 262; on the Carriers in the Kathode Rays, W. B. Morton, 365; Relation between Electric Conductivity and Pressure, G. Tammann, 262; a Fallacy in Electrical Pressure, E. Lecher, 262; Distribution of Free Electricity at Surface of a Crookes' Tube, E. Riecke, 262; Photography of Current Curves, J. Zenneck, 262; Recherches Experimentales sur les Oscillations Électriques, A. Turpain, 268; Thermo-electric Properties of Mercury, Dr. W. Peddie and A. B. Shand, 286; Death of Prof. D. E. Hughes, F.R.S., 302; Obituary Notice of, 325; new Formula for Ostwald's Dilution Law, Dr. W. D. Bancroft, 303; Discharge of Electrified Bodies and Ozone Formation, P. Villard, 311; Variation of Resistance of Metallic Wires, H. Chevallier, 311; Hall Phenomenon and Thermomagnetic Currents, G. Moreau, 311; Contact Electricity, 332; Use of Price's Guard Wire in Insulator Tests, Prof. Ayrton and Mr. Mather, 334; Fault-test for Cable-cores, Mr. Appleyard, 334; Reflection and Transmission of Electric Waves along Wires, Dr. E. Barton and L. Lownds, 334; Electrolysis of Nitrogen Hydrides and Hydroxylamine, E. C. Szarvasy, 335; Measurement of Capacity in Heterogeneous Medium, A. A. Petrovsky, 335; the Effects of Lightning upon Electric Lamps, Sydney Webb, 343; Sir G. G. Stokes, Bart., F.R.S., 343, 413, 539; Prof. R. W. Wood, 391; Time of Establishing Electric Spark, H. Abraham and J. Lemoine, 360; Improvements in Production of Electrolytic Copper, S. Cowper-Coles, 371; the Production of Electrolytic Copper, Charles H. Lees, 392; the Controversy on Volta's Contact Force, Prof. Oliver Lodge, 382; Stratifications, H. Pellat, 383; Abhandlung der Dynamik, D'Alembert, 390; Ueber die Mathematische Theorie der Electrodynamischen Induction, Ricardo Felici, 390; an Aluminium Cable, 399; a Mercury Jet Interrupter, 421; S. M. Kintner, 590; Atmospheric Electricity, J. Elster and H. Geitel, 422; John Aitken, F.R.S., 514; Atmospheric Electricity and Disease, Dr. Schliep, Prof. John Perry,

F.R.S., 471; Exner's Theory of Atmospheric Electricity, Prof. G. Schwalbe, 546, 554; Advancement of Electrical Chemistry, Dr. F. Mollwo Perkin, 428; Electric Conductivity of Dilute Amalgams, A. Larsen, 432; Stationary Temperature of Electrically Heated Conductor, F. Kohlrausch, 432; Spark Potential in Gases, A. Orgler, 432; the Reversibility of Galvanic Cells, T. S. Moore, 458; Ionisation of Gases in Electric Field, Prof. J. J. Thomson, 458; Action of High-tension High-frequency Currents on Tuberculosis, E. Doumer, 459; Damping of Galvanometer Needles, M. Solomon, 481; Gas-distribution in Electric Field, G. W. Walker, 481; Effects of Strain on Thermo-electric Qualities of Metals, Prof. M. Maclean, 481; Electrical Thermostat, Prof. J. Gibson and A. W. C. Menzies, 482; W. Duane and C. A. Lory, 528; Cadmium Cell as Standard of Electromotive Force, Dr. John Henderson, 483; Electric Charge of Deviable Radium Rays, M. and Mme. Curie, 483; Negative Charge communicated by Radium Rays, Henri Becquerel, 498; Deviation of Radium Rays in Electric Field, Henri Becquerel, 555; Ionisation of Dilute Solution at Freezing-point, W. C. D. Whetham, 504; Experimental Study of Hertz Exciter, R. Swyngedauw, 507; Production of Nitric Acid from Air by Electric Flame, A. McDougall and F. Howles, 507; Electrolysis of Potassium Chloride, H. A. Brochet, 508; Syntony, P. E. Shaw, 529; Electrical Micrometer, P. E. Shaw, 529; Relations between Electrolytic Conductivity and Internal Friction of Saline Solutions, P. Massoulier, 531; Unités Électriques absolues, Prof. G. Lippmann, 539; Electricity in War, Prof. John Perry, F.R.S., 541; Dielectric Constants of Liquid Nitrous Oxide and Nitrogen, Dr. Fritz Hansoehrl, 547; a Vacuum Electroscope, H. Pfau, 554; Discharge of Static Electricity from Points, H. Sieveking, 554; Electrostatic Effects in connection with Vacuum Discharges, J. Stark, 555; Electric Wiring, Fittings, Switches and Lamps, W. Perren Maycock, 562; Electric Bells and Alarms, F. E. Powell, 562; Influence of Heating on passage of Electricity through Rarefied Gases, J. Stark, 572; Viscosity of Dielectric Liquids unaffected by Uniform Electrostatic Field, Drs. G. Pachet and L. Finazzi, 572; the Jungfrau Railway, 572; Velocity of Propagation of Electromagnetic Waves in Bitumen, C. Gutton, 579; Influence of Iron on Discharge of Condenser through Induction Coil, G. A. Hemsalech, 579; the Elements of Alternating Currents, W. S. Franklin and R. B. Williamson, 587; the Action of Electric Tramways on Land End of Submarine Cables, Prof. Andrew Jamieson, 595; Electro-culture, V. A. Tyurin, 602; Electrolytic Estimation of Lead in Lead Sulphates and Chromates, C. Marie, 604; Electric Light Wires and Dust, A. A. C. Swinton, 612; Iron Smelting by Electricity, 618; the Relations between Engineering and Electricity, Sir W. H. Preece, F.R.S., 622; Application of Radio-micrometer to Measurements of Short Electric Waves, G. W. Pierce, 626; Wave Current Generators, C. Heinke, 626; Absorption of Light in Electrically Glowing Gases, M. Cantor, 626; Analysis of Oscillating Discharges by means of Braun Tube, F. Richarz and W. Ziegler, 627; Mixture of Three Powders for Producing Electric Dust-figures, K. Bürker, 627; Quincke's Rotations in Electric Field, L. Graetz, 627; Apparatus for Decorating Front of Electricity Section of Paris Exhibition, M. d'Arsonval, 628; Increases of Resistance in Radio-conductors, Edouard Branly, 628; Elementary Practical Mathematics, Frank Castle, 53; Elements of Physics, Henry Crew, Prof. Arthur Schuster, F.R.S., 27; Elliott (W. J.), Action of Chloroform and Potassium Hydroxide on Orthoamidobenzoic Acid, 264; Elliptic Elements of the Variable  $Y$  Cygni, Prof. N. C. Danér, 574; Elster, (J.), the Macfarlane-Moore Vacuum Tube, 93; Influence of Becquerel Rays on Electric Sparks, 190; Atmospheric Electricity, 422; Elwes (H. J.), F.R.S., Illustrations of Lepidoptera, 468; Bulgarian Lepidoptera, 627; Embryology: Merogenic Impregnation, Yves Delage, 24; the Development of Ganglion Cells and Nerves, N. Goronowitsch, 158; Embryology of Marsupials, J. P. Hill, 400; Die Elemente der Entwicklungslehre des Menschen und der Wirbelthiere, O. Hertwig, 610; Emden (R.), Resistance to Projectiles in Air, 93

- "Emerods," the, of the Bible Bubonic Plague, Dra. F. Fridswell and J. A. Dick, 501
- Emerson (Prof. B. K.), Geology of Old Hampshire County, Mass., 601
- Empires, the Passing of the, G. Maspero, 361
- Enamelling, Art, Theory and Practice of upon Metals, Henry Cunynghame, 466
- Encyclopædia Biblica, Rev. T. K. Cheyne, 148
- Energy of the Becquerel Rays, Suggested Source of the, Dr. Fred T. Trouton, F.R.S., 443
- Engineering: the Incrustation of Iron Water Pipes, W. Ingham, 14; Institution of Mechanical Engineers, 14; Messrs. Goode and Matthews on the Admiralty Harbour Works at Dover, 20; Sir Charles Hartley on the Engineering Works of the Suez Canal, 21; M. Alby on the Construction and Erection of the Alexander III. Bridge over the Seine in Paris, 21; Mr. Cowper-Coles on some recent Applications of Electro-metallurgy to Mechanical Engineering, 21; Institution of Civil Engineers, 41; Engineering Progress and Problems, Sir Douglas Fox, 41; Elements of Precise Surveying and Geodesy, Prof. Mansfield Merriman, Sir C. W. Wilson, K.C.B., F.R.S., 77; Death of Alexander McDougall, 84; Method of Construction of Waterloo and City Railway, H. H. Dalrymple-Hay, 85; Electrical Equipment of Waterloo and City Railway, B. M. Jenkin, 85; the Fitting of the Cycle to its Rider, R. E. Crompton, 87, 391; C. Crompton, 87; D. E. Hutchins, 368; W. H. Massey, 391; the Steam Engine and Gas and Oil Engines, Prof. John Perry, F.R.S., 100; the Resistance of the Air, 248; Prof. G. H. Bryan, F.R.S., 107, 248; Pontoon-based Swing Bridges at Northwich, 135, 327; Valve Motions of Engines, Prof. John Perry, F.R.S., 152; Refuse-destruction and Steam-raising, C. N. Russell, 185; Engineering at Cambridge, 346; the Functions of the Engineer, Sir William Henry Preece, K.C.B., F.R.S., 374; Motive Power, Steam Turbines, High Speed Navigation, Hon. C. A. Parsons, F.R.S., 424; the Problem of Coaling at Sea, 430; Mining Engineers' Report Book and Directors' and Shareholders' Guide to Mining Reports, Edwin R. Field, 489; Death and Obituary Notice of Samson Jordan, 544; the Jungfrau Electric Railway, 572; Development of Manufacture and Use of Rails in Great Britain, Sir J. L. Bell, F.R.S., 595; Wear of Steel Rails in Tunnels, Thomas Andrews, F.R.S., 595; Mine Drainage, Stephen Michell, Prof. W. Galloway, 606; the Relations between Electricity and Engineering, Sir W. H. Preece, F.R.S., 622
- English (Douglas), Photography of Live Fish, 451
- English Language: the Standard Intermediate School Dictionary of the, James C. Fernald, 220; Students' Edition of a Standard Dictionary of the, James C. Fernald, 220
- English Station for Botanical Research in the Tropics (Ceylon), John C. Willis, 32
- Englishwoman's Year-book and Directory, the, 270
- Enlistment, Racial Aspect of Voluntary, R. C. T. Evans, 200
- Entomology: Entomological Society, 46, 94, 165, 191, 335, 406, 506, 577, 627; the Cambridge Natural History, David Sharp, W. F. H. Blandford, 49; Birds Capturing Butterflies, F. Finn, 55; Oswald H. Latter, 56; Howard Fox, 152; George A. Soper, 491; Butterfly-Shadows, Commander D. Wilson-Barker, 128; Can Ants Hear? Mr. Weld, 157; Shadows of Insects, Wm. Parkinson, 177; General Index by Robert Newstead, F.E.S., Curator of the Grosvenor Museum, Chester, to Annual Reports of Observations of Injurious Insects, 1877-1898, Eleanor A. Ormerod, 126; Proceedings of the Eleventh Annual Meeting of the Association of Economic Entomologists, 221; Collops Beetle feeding on Larva of Colorado Potato Beetle, 328; Our Insect Friends and Foes: how to Collect, Preserve, and Study them, Belle S. Cragin, 342; the Coccidae of New Zealand, Prof. T. D. A. Cockerell, 367; Stridulating Beetles, Mr. Gahan, 406; British Dragonflies, W. J. Lucas, 418; Illustrations of Lepidoptera, H. J. Elwes, F.R.S., 468; a New Attid Spider, *Mantisatta trucidans*, C. Warburton, 579; the Locust Plague in New South Wales, W. W. Froggart, 620; Bulgarian Lepidoptera, H. J. Elwes, 627
- Entropy of Radiation, J. Van der Waals, jun., 407
- Ephemerides, Time used in, 374
- Epilepsy, Effect of Diet poor in Chlorides upon the Treatment by Sodium Bromide of, Ch. Richet and E. Toulouse, 120
- Equation-solving Machine, Georges Meslin, 579
- Équilibre des Systèmes Chimiques, J. Willard Gibbs, 390
- Equilibrium: a Simple Proof of Gibbs' Phase Rule, Prof. Kuenen, 359
- Equilibrium of Vessel carrying Liquid, M. Appell, 24
- Erde, die hochgebirge der, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219
- Erdmann (Prof. Dr. H.), Anleitung zur Darstellung chemischer Präparate. Ein Leitfaden für den praktischen Unterricht in der Anorganischen Chemie, 246
- Eros, Orbit of, 236
- Erythrean Rift Valley, the Continuity of the, L. Vannutelli and C. Citterni, 75
- Escape of Gases from Planetary Atmospheres, S. R. Cook, 501; Dr. G. Johnstone Stoney, F.R.S., 515
- Essai Critique sur l'Hypothèse des Atomes dans la Science Contemporaine, Arthur Hannequin, 26
- Essais du Commerce et de l'Industrie, L. Cuniasse and R. Zwilling, 176
- Essex Naturalist, the: the Journal of the Essex Field Club, 245
- Estreicher (Dr. T.), Solubility of Argon and Helium in Water, 260
- Etard (A.), Oxidation by Ferricyanides, 459
- Ether, Attempt to Reconcile apparently Opposite Mechanical Properties of the, Lord Kelvin, 166
- Etheridge (R., jun.), *Blechnoxylon*, 303
- Ethnography: On Recent and most Excellent Ethnographical Work in East Aberdeenshire, J. Gray, 43; Ethnographic Survey of Canada, 45; Ethnographical Museums, 154; Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193; the Races of Man: an Outline of Anthropology and Ethnography, J. Deniker, Prof. A. C. Haddon, F.R.S., 462; Ethnography of Solomon Islands, R. Parkinson, 546
- Etna, the Eruption of July 19, 1899, 185
- Êtres Vivants, les, Paul Busquet, 609
- Etruscan Numerals, the, E. E. Lattes, 371
- Euclid, Books I.-II., Charles Smith and Sophie Bryant, 102
- Euclid, the Elements of, R. Lachlan, 176
- Euclid's Elements of Geometry, Charles Smith and Sophie Bryant, 365
- Eudesmol, H. G. Smith, 47
- Europe, the Geography of, Geo. G. Chisholm, Dr. Hugh Robert Mill, 368
- European Fauna, the History of, Dr. R. F. Scharff, 341
- Evans (A. J.), on the Occurrence of "Celtic" Types of Fibulae of the Hallstatt and La Tène Periods in Tunisia and Eastern Algeria, 43
- Evans (John W.), the Wind during Eclipses of the Sun, 200
- Evans (R. C. T.), Racial Aspect of Voluntary Enlistment, 200; Floating Stones, 318; Drunkenness and the Weather, 469
- Evermann (Barton Warren), the Fishes of North and Middle America: a Descriptive Catalogue of the Species of Fish-like Vertebrates found in the Waters of North America, North of the Isthmus of Panama, 362
- Evolution: Marriages of the Deaf in America, Edward Allen Fay, Dr. Macleod Gearsley, 97; the Methods of Inorganic Evolution, Sir Norman Lockyer, K.C.B., F.R.S., 129, 296; Evolution of General Ideas, Prof. Th. Ribot, 149; some Recently-discovered Silurian Fish Remains, a Link in the Chain of Organic Evolution, R. H. Traquair, F.R.S., 307; a First Book in Organic Evolution, Dr. D. Kerfoot Shute, 488; the Evolution of Geography, a Sketch of the Rise and Progress of Geographical Knowledge from the Earliest Times to the First Circumnavigation of the Globe, John Keane, 317; Mathematical Contributions to Theory of Evolution, viii., Karl Pearson, 505; Death of Prof. St. George Mivart, 544; Obituary Notice of, 569; les Êtres Vivants, Paul Busquet, 609
- Evoy Compass, the, 398
- Ewing (Prof. J. A., F.R.S.), the Strength of Materials, 197
- Exercise and Respiration, Dr. A. Foxwell, 39
- Exercises in Practical Physics, R. A. Gregory and A. T. Simmons, 390
- Exner's Theory of Atmospheric Electricity, Prof. G. Schwalbe, 546, 554
- Experimental Physik, Lehrbuch der, Adolph Willner, 221
- Experimenting, History of the Art of, Dr. E. Gerland and Dr. F. Traummüller, 4
- Experiments on Animals, Stephen Paget, 512

- Exploration of the Sea, Stockholm International Conference on the, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; Geo. Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413
- Explosions, Note on Distances to which Explosions are Felt and Heard, Dr. Charles Davison, 91
- Explosions in Air, W. Wolff, 93
- Explosives, Modern, J. S. S. Brame, 548
- Eyk (Herr van), Physico-chemical Studies of Tin, 330
- Eykman (P. H.), New Graphical System of Craniology, 408
- Fabry (Ch.), Mass of Cubic Decimetre of Water, 71; New Source of Light for Spectrometry of Precision, 407; Constitution of Yellow Sodium Rays, 483
- Fahie (J. J.), a History of Wireless Telegraphy, 243
- Faith, Science and, or Man as an Animal, and Man as a Member of Society: with a Discussion of Animal Societies, Dr. Paul Topinard, 270
- Faraday and Schönbein, the Letters of, 1836-1862; with Notes, Comments, and References to Contemporary Letters, Prof. R. Meldola, F.R.S., 337
- Farmer (Prof. J. Bretland), A Practical Introduction to the Study of Botany: Flowering Plants, 150; a New Departure in Cytology, Dr. Alfred Fischer, 385
- Farms, Australian Experimental, 528
- Farquhar (H.), the New Zealand Zoological Region, 246
- Farquharson (Col. Sir John), Progress of the Work of the Ordnance Survey during the Last Twelve Years, 20
- Fassig (O. L.), March Weather in United States, 93
- Fatigati (Dr. E. S.), Natural Objects in Old Spanish Sculpture, 15
- Faulty Rum, the Micro-organism of, V. H. Veley, F.R.S., and Lilian J. Veley, 468
- Fauna, Dr. W. Kobelt and the Mediterranean, Prof. Henry H. Giglioli, 227; the Reviewer, 227
- Fauna, the History of European, Dr. R. F. Scharff, 341
- Fay (Edward Allen), Marriages of the Deaf in America, 97
- Fay (Mr.), the Homogeneity of Tellurium, 402
- Feather-stars, the, of the Bahamas, Prof. Verrill, 16
- Federico (Dr. R.), Wehnelt's Interrupter, 328
- Felici (Ricardo), Ueber die Mathematische Theorie der Electrodynamische Induction, 390
- Fenton (H. J. H.), Oxalacetic Acid, 190; Researches in Sugar Group, 215
- Fernald (James C.), Students' Edition of a Standard Dictionary of the English Language, 220; the Standard Intermediate School Dictionary of the English Language, 220
- Ferns Ostens, Die Orkane des, Dr. Paul Bergholz, 317
- Ferns; How to Know the True Ferns, Frances Theodora Parsons, 412; *Asplenium Bradleyi*, R. M. Middleton, 458
- Fertilisation, Experimental Study of, Prof. Yves Delage, 551
- Fertilisation of Flowers in New Zealand, Geo. M. Thomson, 564
- Field (Edwin R.), Mining Engineers' Report Book, and Directors' and Shareholders' Guide to Mining Reports, 489
- Field and Folklore, Harry Lowerison, 102
- Fifth Satellite of Jupiter, Orbit of, Prof. E. E. Barnard, 157
- Fiji, Edible Earth from, Dr. Corney, F. B. Guthrie and Prof. T. W. E. David, 484
- Fiji, Evidence of Upheaval in Vanua Levu, Dr. H. B. Guppy, 248
- Film Gratings, Echelon, Charles P. Butler, 275
- Filon (L. N. G.), Resistance of certain forms of Shafting to Torsion and Effect of Keyways thereon, 93
- Finazzi (Dr. L.), Viscosity of Dielectric Liquids unaffected by Uniform Electrostatic Field, 572
- Finger-prints as a Method for the Identification of Criminals, E. R. Henry, 42
- Finland, Archæan Rocks of, J. J. Sederholm, 373
- Finn (F.), Birds Capturing Butterflies, 55
- Fireball, a Brilliant, Mr. Crommelin, 548
- First Steps in Earth-knowledge; being an Introduction to Physiography, J. A. Harrison, 317
- Fischer (Dr. Alfred), Fixirung, Färbung, und Bau des Protoplasmas, Kritische Untersuchungen ueber Technik und Theorie in der Neueren Zellforschung, 385
- Fischer (Prof. Emil), Stereo-chemistry and Physiology, 140; Recent Researches on Uric Acid, 187
- Fisheries: the Stockholm International Fisheries Conference, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; George Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413; Sea Fisheries of Jamaica, Mr. Duerden, 157; Sea Fisheries, Report of Northumberland Committee for 1899, 354
- Fishes: a Descriptive Catalogue of the Indian Deep-sea Fishes in the Indian Museum, 291; an Account of the Deep-sea Brachyura: being Systematic Reports upon the Materials Collected by the Royal Indian Marine Survey Ship *Investigator*, 1874-1899, A. Alcock, 291; the Fishes of North and Middle America: a Descriptive Catalogue of the Species of Fish-like Vertebrates Found in the Waters of North America, North of the Isthmus of Panama, David Starr Jordan and Barton Warren Evermann, 362
- Fiske (John), a Century of Science and other Essays, 390
- Fitting of the Cycle to its Rider, R. E. Crompton, 87, 391; C. Crompton, 87; D. E. Hutchins, 368; W. H. Massey, 391
- Fitzgerald (Prof. G. F., F.R.S.), Size at which Heat-movements are Manifested in Matter, 612
- Fitz-Patrick (J.), Exercises d'Arithmétique, 314
- Flammarion (Camille), Solar Eclipses in the Twentieth Century, 548
- Flightless Rail, the, of New Zealand, Prof. W. B. Benham, 576
- Flinders Petrie (Prof. W. M.), on Sequences of Prehistoric Remains, 43; on Early Mediterranean Signaries and the Sources of the Alphabet, 44; Flint Implements from Egypt, 95
- Flint Implements from Egypt, Prof. W. M. Flinders Petrie, 95
- Flint Implements from Nile Valley, Dr. H. O. Forbes, 597
- Flints, the Colour of, W. H. Wheeler, 106
- Flints, Pigmy, in Yorkshire, R. A. Gatty, 282
- Floating Sand, F. W. Simonds, 500
- Floating Stones, Dr. Erland Nordenskiöld, 278; Cecil Carus-Wilson, 318; R. C. T. Evans, 318; Prof. A. W. Brightmore, 346
- Floods, Recent, in England, 398
- Flora of Kent, F. J. Hanbury and E. S. Marshall, 489
- Flora of New Zealand and the Outlying Islands, the Student's, Thomas Kirk, W. Botting Hemsley, F.R.S., 146
- Floral Colours, Experiments on the, P. Q. Keegan, 105
- Flowerland, Sylvia in, Linda Gardner, 102
- Flowers, Fertilisation of, in New Zealand, Geo. M. Thomson, 564
- Flux (Prof. A. W.), Internal Migration in England and Wales, 383
- Folklore: Field and Folklore, Harry Lowerison, 102; Catalogue of a Collection of Objects illustrating the Folklore of Mexico, Prof. Frederick Starr, 488
- Fomm (L.), Electric Pictures, 93
- Fonze-Diacon (M.), Hexagonal Form of Selenide of Zinc, 556; a Crystalline Selenide and Oxy-selenide of Manganese, 604
- Food: Comparative Dietary of Great Britain, Belgium, France and Germany, R. F. Crawford, 520
- Food-preserving Methods, Dr. S. Rideal, 519
- Foot (W. M.), a New Meteoric Iron, 190
- Forbes (Dr. Henry O.), the Rostrum of *Mesopladon*, 490; Flint Implements from the Nile Valley, 597
- Forcrand (M. de), Action of Hydrogen Peroxide on Baryta, 508; Heat of Formation of Hydrated and Anhydrous Strontium Dioxide, 604
- Forestry: Botany and the Indian Forest Department, Prof. W. Schlich, 6; the Indian Forest Service, W. F. Sinclair, 31; Indian Forest Insect-pests, E. P. Stebbing, 38; Ueber den Habitus der Coniferen, Dr. A. H. Burt, 28; Forest Fires and Insects, Dr. A. D. Hopkins, 327
- Formalin as a Preservative, 204
- Formalin as a Preventive of Silkworm Disease, Prof. G. Gianole and Dr. E. Zappa, 520
- Forster (M. O.), Camphoroxime, 94; Nitrocamphane, 405
- Fosse (R.), Acetals of Phenols, 508
- Fossil Remains of Lake Callabonna, 275
- Foster (Prof. Le N.), Mineral Industries of the World, 594
- Foster (Sir Michael, K.C.B., M.P.) and his Pupils, 497
- Fowle (C. E.), a Compound Prism of Uniform Dispersion, 597
- Fowler (J. S.), the Diseases of Children, 5
- Fox (Sir Douglas), Engineering Progress and Problems, 41
- Fox (Howard), Halo round a Shadow, 7; Birds Capturing Butterflies, 152
- Foxwell (Dr. A.), Exercise and Respiration, 39
- France, Bulletin de la Société Astronomique de, 577

- François (Maurice), Dissociation of Potassium and Ammonium Iodomercurates by Water, 167; Action of Strong Ammonia Solution on Iodide of Mercurdiammonium, 384; Monomercurammonium Iodide, 604
- Frankenfield (H. C.), Kite Observations of 1898, 371
- Franklin (W. S.), the Elements of Alternating Currents, 587
- Fraps (Dr.), no Isomerism in Sodium Potassium Sulphite, 547
- Fraser (D. H.), Supernumerary Teeth, 482
- Freeman (W. G.), on the *Anabaena*-containing Roots of some Cycads, 66
- French (C. H.), Elementary Algebra, 200
- French (William), Practical Chemistry, 514
- Frenkel (H.), Concerning Physiological Alternation of Kidneys, 483
- Friderich (Louis), Surface Tension of some Organic Liquids, 383
- Frillat (A.), Transformation of Negative Photographic Image into Lamellar State, and Colour Phenomena resulting therefrom, 335
- Frobenius (L.), Primitive Mathematics, 259
- Froggart (W. W.), the Locust Plague in New South Wales, 620
- Frost (Prof. E. B.), Spectroscopic Binary Stars, a *Ursæ Minoris*, 114
- Functions, the, of the Engineer, Sir William Henry Preece, K.C.B., F.R.S., 374
- Fungi: the North American Slime Moulds, Prof. T. H. MacBride, 173
- Furnace, New Gas, Armand Gautier, 478
- Gage (G. A.), Magnetic Qualities of Building Brick, 421
- Gahan (Mr.), Stridulating Beetles, 406
- Gallard (F.), Absorption of Iodides by Human Skin, 556
- Galloway (Prof. W.), Mine Drainage, Stephen Michell, 606
- Galt (Dr. A.), Heat of Combination of Metals in Alloy-formation, 579
- Galton (Dr. Francis, F.R.S.), a Geometric Determination of the Median Value of a System of Normal Variants, from two of its Centiles, 102
- Gamble (F. W.), the Colour-physiology of *Hippolyte varians*, 552
- Game: the Protection of Wild Animals in Africa, 616; in America, Prof. S. P. Langley, 617
- Ganglion-cells and Nerves, the Development of, N. Goronovitch, 158
- Gannon (William), Substitute for Gas in Laboratories, 128
- Garbett (E. L.), the Smell emitted by Quartz when Rubbed, 491
- Gardens, School, G. B. Smith, 455
- Gardiner (Linda), Sylvia in Flowerland, 102
- Gardner (J. A.), Bromo-derivatives of Campho-pyric Acid, 434
- Garnier (E.), La Céramique Ancienne et Moderne, 466
- Garriott (Prof. E. B.), the West Indian Hurricane of August, 7-14, 1899, 112
- Garstang (Mr.), Water Temperature of Mouth of English Channel, 450
- Gas Furnace, New, Armand Gautier, 478
- Gas in Laboratories, Substitute for, William Gannon, 128
- Gas and Oil Engines, the Steam Engine and, Prof. John Perry, F.R.S., 100
- Gases: the Rise and Development of the Liquefaction of Gases, Willett L. Hardin, 98; La Liquefaction des Gaz et ses Applications, Prof. Julian Lefèvre, 98; the Kinetic Theory of Gases, Dr. Oskar Emil Meyer, 289; Prof. G. H. Bryan, F.R.S., 289; a Treatise on, S. H. Burbury, 289; Prof. G. H. Bryan, F.R.S., 289; Escape of Gases from Planetary Atmospheres, S. R. Cook, 501; Dr. G. Johnstone Stoney, F.R.S., 515
- Gatty (R. A.), Pigmy Flints in Yorkshire, 282
- Gaud (Fernand), Spectrophotometry of Electric Light, 95
- Gauss, the Correspondence of Olbers and, Dr. J. L. E. Dreyer, 486
- Gautier (Armand), Glycogen, 71; Normal Arsenic, in Animals, 166-7; Arsenic in Animals, 383; New Gas Furnace, 478
- Gautier (H.), Atomic Weight of Boron, 48
- Gearsley (Dr. Macleod), Marriages of the Deaf in America, 97
- Geelmuyden (M.), Reducing Action of Calcium Carbide, 604
- Geinitz (Dr. H. B.), Death and Obituary Notice of, 450
- Geitel (H.), the Macfarlane-Moore Vacuum Tube, 93; Influence of Becquerel Rays on Electric Sparks, 190; Atmospheric Electricity, 422
- Gelation, Mechanism of, and Stability of Hydrosols, W. B. Hardy, 599
- Gellé (E.), Movements of Expired Air during Formation of Speech Sounds, 384
- Genyresse (P.), a New Terpenic Alcohol and its Derivatives, 580
- Geodesy: Elements of Precise Surveying and, Prof. Mansfield Merriman; Sir C. W. Wilson, K.C.B., F.R.S., 77
- Geography: on the Sand Dunes bordering the Delta of the Nile, Vaughan Cornish, 20, 403; a Wooden Ball of Unknown Origin, Prof. H. Mohn, 31; the International Geography, Prof. T. G. Bonney, F.R.S., 50; the Naval Pioneers of Australia, Louis Becke, Walter Jeffery, 53; Seconda Spedizione Bottego. L'Omo. Viaggio d'Esplorazione nell'Africa, Orientale L. Vannutelli and C. Citerni, 75; Studien zur Geographie, Dr. W. Kobelt, 99; the Teaching of Geography in Switzerland and North Italy, Joan Berenice Reynolds, 126; the Possibilities of Antarctic Exploration, F. A. Cook, 136; Geographical Results of Belgian Antarctic Expedition, Dr. F. A. Cook, 258; Meteorology at the Berlin Geographical Congress, A. Lawrence Rotch, 177; the Writer of the Report, 177; the Yangtze Valley and Beyond, Mrs. J. F. Bishop, 252; Physical Geography, Prof. W. M. Davis, assisted by W. H. Snyder, 266; the Evolution of Geography: a Sketch of the Rise and Progress of Geographical Knowledge from the Earliest Times to the First Circumnavigation of the Globe, John Keane, 317; Death of Gen. Alexis de Tillo, 326; Obituary Notice of, 396; Geography of South West Sussex, Dr. H. R. Mill, 353; the Geography of Europe, Geo. G. Chisholm, Dr. Hugh Robert Mill, 368; Russian Geographical Society's Prize Awards, 397; Innermost Asia, Ralph P. Cobbold, 495; Return of Borchgrevink's Antarctic Expedition, 544; Grundzüge der geographisch-morphologischen Methode der Pflanzensystematik, Dr. R. von Wettstein, 563
- Geology: the Silurian Rocks of Britain. Vol I., Scotland, B. N. Peach, F.R.S., and J. Horne, 25; Death of Dr. Edward Orton, 38; Obituary Notice of, 59; Fundamental Structure-lines of Eastern Alps, Dr. C. Diener, 40; Geological Society, 142, 191, 285, 311, 382, 506, 530, 578, 603; Conglomerates of East Bokhara, W. R. Rickmers, 59; the Old Red Sandstone of Shetland, 80; Death and Obituary Notice of Sir J. William Dawson, LL.D., F.R.S., 80; Death of Dr. Henry Hicks, F.R.S., 84; Obituary Notice of, 109; the Colour of Flints, W. H. Wheeler, 106; Geology of Country Round Dorchester, Clement Reid, 113; Alaska and the Klondike, Angelo Heilprin, 122; the Cause of the Darjeeling Landslips, T. H. Holland, 127; a Canadian Lake of Subterranean Inflow, Andrew T. Drummond, 128; Geschichte der Geologie und Paläontologie bis Ende des 19 Jahrhunderts, Karl Alfred v. Zittel, 145; Calcare Sponges from Victoria Eocene, Dr. G. J. Hinde, F.R.S., 142; the Silurian Sequence of Rhayader, Herbert Lapworth, 143; Glaciated Pebbles in Lochinvar, (N.S.W.) Permo-Carboniferous Coalfield, 167; Geological Survey of the United Kingdom, 181; the Dwyka (South Africa) Boulder-beds, Dr. Blanford, 191; Geology of Somaliland, Dr. J. W. Gregory, 191; Drift Gravels at West Wickham, George Clinch, 191; *Palaeoioleile* in British Carboniferous Rocks, Dr. W. Hind, 191; Advance and Retreat of Alpine Glaciers during Ice Age, 207; Results of Recent Soundings in the Pacific, Prof. Alexander Agassiz, 211; Die hochgebirge der Erde, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219; the Geology and Physical Geography of Jamaica, Robert T. Hill, 237; the Orange River Ground Moraine near Prieska, Messrs. Rogers and Schwarz, 240; Evidence of Upheaval in Vanua Levu, Fiji, Dr. H. B. Guppy, 248; Geology of Western Australia, A. G. Maitland and T. Blatchford, 259; Floating Stones, Dr. Erland Nordenskiöld, 278; Cecil Carus-Wilson, 318; R. C. T. Evans, 318; Prof. A. W. Brightmore, 346; Effect of Earth Movement on Carboniferous Volcanic Rocks of Isle of Man, G. W. Lamplugh, 285; Diabasic Intrusion in Tasmanian Permo-Carboniferous Rocks, T. Stephens, 286; *Blechnoxylon*, R. Etheridge, jun., 303; on *Thelodus Pagei* from the Old Sandstone of Forfarshire and Report on the Fossil Fishes Collected by the Geological Survey of Scotland in the Silurian Rocks of the South of Scotland, R. H. Traquair, F.R.S., 307; Glaciation of Central Idaho, G. H. Stone, 310; a Particular Form of Surface the Result of

- Glacial Erosion, Dr. W. T. Blandford, F.R.S., 311; Formation of Dendrites, A. O. Watkins, 311; the Crystalline and Volcanic Rocks of Southern China, MM. Levy, Lacroix, and Leclère, 359; Archean Rocks of Finland, J. J. Sederholm, 373; Geology of Mount Kenya, Dr. J. W. Gregory, 382; Elaeolite-syenite and Fouchite of British East African Coast, Dr. J. W. Gregory, 382; Mechanical Theory of Mountain Formation, Marcel Bertrand, 883; Origin of Granite, C. E. Stromeyer, 358; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589; Death of K. M. Paul, 397; Metamorphic Rocks in Tyrone and Donegal, Prof. G. A. J. Cole, 407; the Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, Daniel C. Gilman, Prof. John W. Judd, C.B., F.R.S., 409; Sedimentary Rocks of Southern Patagonia, J. B. Hatcher, 432; Devonian Strata in Colorado, A. C. Spencer, 432; the Scientific Study of Scenery, John E. Marr, F.R.S., 441; Geology of Galician Oil-bearing Strata, Prof. R. Zuber, 452; Similar Geological Structures in South Tyrol and the Isle of Man, Dr. Maria M. Gordon, 490; Lower Cambrian Terrane in Atlantic Province, C. D. Walcott, 500; Geology of Gilgit, Lieut.-General C. A. McMahon, F.R.S., 530; Rocks of South-east Coast of Jersey, John Parkinson, 530; Death and Obituary Notice of G. H. Morton, 571; the South Alaskan Gold-fields, G. F. Becker, 600; Coal-fields of Puget Sound, Washington, B. Willis, 600; the Judith Mountains of Montana, W. H. Weed and L. V. Pirsson, 600; Mining Districts of Idaho Basin, W. Lindgren, 600; Mining Industries of Telluride Quadrangle, Colorado, C. W. Rivington, 600; the Movements of Ground-water, F. H. King, 601; Geology of Old Hampshire County, Mass., Prof. B. K. Emerson, 601; the Aspen Mining District, Colorado, J. E. Spurr, 601; Eruptive Rocks from New Zealand, Frank Rutley, 603; Minerals containing Rare Earths, Baron A. E. Nordenskiöld, 603; Rock-structures in Isle of Man and South Tyrol, G. W. Lamplough, 612; Petroleum in Algeria, M. Neuburger, 618; Zones in the Chalk, Dr. A. W. Rowe, 625; See also Palaeobotany, Palaeontology, and Glaciology.
- Geometry: Practical Plane and Solid Geometry, J. Harrison, G. A. Baxandall, 101; Euclid, Books I.-IV., Charles Smith, Sophie Bryant, 102; Euclid's Elements of Geometry, Charles Smith and Sophie Bryant, 365; a Geometric Determination of the Median Value of a System of Normal Variants, from Two of its Centiles, Dr. Francis Galton, F.R.S., 102; Geometrical Representation of Relation between Wave-velocity and Group-velocity, Prof. Horace Lamb, F.R.S., 286; the Elements of Co-ordinate Geometry, J. H. Grace, 412
- Gérard (E.), Co-existence of Reducing and Oxidising Diastase in Animal Organs, 192; Transformation of Nitrobenzene into Aniline by Horse-kidney Ferment, 407
- Gerland (Dr. E.), Geschichte der Physikalischen Experimentierkunst, 4
- Germany: Artificial Paving Stones in Germany, 14; the Conference of German Men of Science at Munich, 62; German Antarctic Expedition, Prof. Erich von Drygalski, 318; Muret-Sander's Encyclopedic English-German and German-English Dictionary, 610
- Gernez (D.), Transformation Temperature of Quadratic and Orthorhombic Mercuric Iodide, 239
- Gerschun (AL.), Method for Determining Mean Density of Earth, 192
- Getman (Frederick Hutton), the Elements of Blowpipe Analysis, 176
- Geyser Activity, Decline of, in Yellowstone Park, Prof. E. H. Barbour, 398
- Ghosts, Illogicality Concerning, Kumagusu Minakata, 564
- Giacobini, Comet (1899 e), 17, 87, 114, 137; M. Perrotin, 47
- Giacobini, Comet (1900 a), 355, 402, 424
- Gianoli (Prof. G.), Formalin as a Preventive of Silkworm Disease, 520
- Giappone, Cina e, E, von Hesse Wartegg, 513
- Gibbs (J. Willard), Equilibre des Systemes Chimiques, 390
- Gibbs' Thermodynamical Model, W. B. Boynton, 414
- Gibson (Prof. J.), Electric Thermostat, 482
- Giesel (F.), Magnetic Deflection of Becquerel Rays, 262
- Giffen (Sir R., K.C.B., F.R.S.), the Coming Wheat Scarcity, 169; Economic Science, 581
- Giggleswick Well, the Silver Thread Phenomenon in, Dr. Broadbent, 70
- Giglioli (Prof. Henry H.), Dr. Kobelt and the Mediterranean Fauna, 227
- Gilbody (A. W.), Brasilin and Hæmatoxylin, III., 264
- Gill (Dr.), Cape Star Catalogue for 1890, 597
- Gillot (M.), Hydrolysis of Raffinose by *Penicillium glaucum*, 621
- Gilman (Daniel C.), the Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, 409
- Glaserapp (S. de), Observations of the Leonids, 359
- Glycogen, Microscopic Researches on, Part II., Charles Creighton, 586
- Goillard (Cl.), New Fossil Myocene Rodent, *Anomalomys Gaudryi*, 336
- Gold Mining: Alaska and the Klondike, Angelo Heilprin, 122
- Goniometer, New Three-circle, G. H. F. Smith, 113
- Gooch (F. A.), Action of Acetylene on Copper Oxides, 93
- Goode and Matthews (Messrs.), on the Admiralty Harbour Works at Dover, 20
- Gordon (Dr. Maria M.), Similar Geological Structures in South Tyrol and the Isle of Man, 490
- Gore (Dr. G.), the Scientific Basis of Morality, 389
- Goronovitsch (N.), Untersuchungen über die erste Anlage der Kraniálnerven bei *Salmo fario*, 158
- Göttingen Royal Society, 168
- Gould, the (Benjamin Althorp), Fund, 479
- Gowan (Miss J.), on the Morphology and Geological History of the Maiden-Hair Tree, 69
- Grace (J. H.), the Elements of Co-ordinate Geometry, 412
- Graeffe (Herr), The Preparation of Metallic Cesium, 61
- Graetz (L.), Quincke's Rotations in Electric Field, 627
- Graftonite, S. L. Penfield, 310
- Grand'Eury (M.), Origin of Fossil Trunks in Coal-measures, 579; the Stigmara, 628
- Granger (Albert), an Arsenide of Nickel, 580
- Granite, Origin of, C. E. Stromeyer, 358; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589
- Granodiorite, W. Lindgren, 626
- Grating, New Mode of Using Concave Diffraction, Dr. G. B. Rizzo, 501, 541
- Gratings, Echelon Film, Charles P. Butler, 275
- Gray (J.), on Recent and most excellent Ethnographical Work in East Aberdeenshire, 43
- Green (N. E.), Death and Obituary Notice of, 156
- Greenhill (Prof. R. G., F.R.S.), Practical Mathematics, by Prof. John Perry, F.R.S., 582
- Greenish (Henry G.), an Introduction to the Study of Materia Medica, 174
- Gregory (J. R.), Death and Obituary Notice of, 302
- Gregory (Dr. J. W.), Geology of Somaliland, 191; Ancestry of Helioporide (Blue Coral), 311, 555; Geology of Mount Kenya, 382; Elaeolite-syenite and Fouchite of British East African Coast, 382
- Gregory (R. A.), Experimental Science (Physiography: Section I.), 77; Exercises in Practical Physics, 390
- Gréhan (N.), Estimation of Alcohol in Blood and Tissues, 95
- Grey's Rock Paintings, H. Ling Roth, 248
- Griffini (Prof. Achille), Zoologia, 175
- Griffon (Ed.), Chlorophyll Assimilation in Solar Light which has traversed Leaves, 239
- Grindley (J. H.), Thermodynamic Properties of Superheated Steam, 432
- Growth of Animal and Vegetable Organisms, the, Charles Benedict Davenport, 218
- Grye (M. Bouquet de la), the Solar Parallax, 192, 236
- Guatemala, a Glimpse at, and Some Notes on the Ancient Monuments of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, A. H. Keane, 292
- Guerbet (M.), Composition of East Indian Sandal Wood Essence, 407
- Guglielmo (G.), Hydrometers, 371, 421
- Guiana, British, Zoology of Mt. Roraima, F. V. McConnell and J. J. Quelch, 406
- Guichard (Marcel), Molybdenum Dioxide, 71; Molybdenum Disulphide, 239; New Crystallised Molybdenum Sulphide, 312
- Guignard (L.), Double Fertilisation in Lilium, 507
- Guignet (E.), La Céramique Ancienne et Moderne, 466
- Guillaume (Dr. C. E.), Determination of Mass of Cubic Decimetre of Water, 572

- Guillaume (J.), Observations of the Leonids, 143  
 Guldberg (C. M.), Untersuchungen über die Chemischen Affinitäten, 412  
 Gun-barrels, Vibrations of, C. Kranz, K. R. Koch, 58  
 Guppy (Dr. H. B.), Evidence of Upheaval in Vanua Leva, Fiji, 248  
 Guthrie (Prof. Francis), Death and Obituary Notice of, 84  
 Guthrie (F. B.), Edible Earth from Fiji, 484  
 Gutta Percha: a Gutta Percha Plant, Prof. F. E. Weiss, 7;  
 Les Arbres à Gutta-Percha, leur Culture, Mission relative à l'Acclimatation de ces Arbres aux Antilles et la Guyane, Henri Lecomte, 538  
 Gutton (C.), Velocity of Propagation of Electromagnetic Waves in Bitumen, 579  
 Guyot (A.), The Tautomerism of Benzoyl-benzoic Acid, 239  
 Gwyther (R. W.), Conditions of Solitary Wave-propagation, 383; Motion of Particles in Steady Fluid Motion, 383  
 Haddon (Dr. A. C., F.R.S.), on the Yaraikanna Tribe of Cape York, 44; Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, 193; the Races of Man; an Outline of Anthropology and Ethnography, J. Deniker, 462; Native Life and Customs in Sarawak, 578  
 Hadfield (R. A.), Armour Plates, 301  
 Hadley (H. E.), Magnetism and Electricity for Beginners, 200  
 Haffkine's Anti-plague Inoculations, 550  
 Haffkine's Inoculations and the Indian Plague, 422  
 Haga (T.), Non-existence of Dihydroxylamine Derivatives of Potassium Nitrite, 505  
 Hagen (E.), Reflective Power of Metals, 555  
 Hall-prevention by Gun firing, Dr. J. M. Fernter, 451  
 Hall (H.), New Syntheses of Indene, 505, 547  
 Hall (Leonard), Man, the Microcosm, 6  
 Hall (R.), Albinism and Melanism in Australian Birds, 620  
 Haller (A.), the Tautomerism of Benzoyl-benzoic Acid, 239; Synthesis of Campholic Acid, 407; New Reaction between Aromatic Aldehydes and Sodium Derivative of Borneol, 507  
 Halm (Dr. J.), the Relation between the Periodic Changes of Solar Activity and the Earth's Motion, 445  
 Halo Round a Shadow, Howard Fox, 7  
 Hamburger (Dr.), Fat and Soap Absorption in Large and Small Intestine, 216  
 Hamy (Maurice), Interference Method of Measuring Small Diameters, 402; Determination of Standard Lines in Spectrum, 435; Determination of Standard Points in Spectrum, 507  
 Hanbury (F. J.), Flora of Kent, 489  
 Hanitsch (Dr. R.), Mosquitoes and Malaria, 177  
 Hannequene (Arthur), Essai Critique sur l'Hypothèse des Atomes dans la Science Contemporaine, 26  
 Hantzsch (Prof.), New Iodide of Nitrogen, 453  
 Happiness, Life and, Auguste Marrot, 365  
 Harbour Works at Dover, Admiralty, Messrs. Goode and Matthews, 20  
 Harden (Arthur), Inorganic Chemistry for Advanced Students, 125  
 Hardin Willet (L.), the Rise and Development of the Liquefaction of Gases, 98  
 Hardy (W. B.), Mechanism of Gelation and Stability of Hydrosols, 599  
 Hargrave (L.), Sailing Birds dependent on Wave-power, 167  
 Harker (Alfred), Magnetic Disturbances in Isle of Skye, 459  
 Harker (G.), Composition of New South Wales Labradorite and Topazes, 483  
 Harris (R. A.), Tides along the Antarctic Continent, 490  
 Harrison (J.), Practical Plane and Solid Geometry, 101  
 Harrison (J. A.), First Steps in Earth Knowledge; being an Introduction to Physiography, 317  
 Harrison (R. G.), Experiments on Growth of Tadpole's Tails, 206  
 Hartley (Sir Charles), on the Engineering Works of the Suez Canal, 21  
 Hartley (E. G. J.), Beudantite, 382  
 Hartley Botanical Laboratories of University College, Liverpool, 454  
 Harting (J. E.), Animals and Poisonous Plants, 142  
 Hartmann (Dr. J.), a New Photographic Photometer, 306  
 Harvard College Observatory, 402  
 Harvard Photometry, Proposed New, 208  
 Harvey (A. W.), Racemisation during formation of Benzylidene, Benzoyl and Acetyl Derivatives of Dextro-ac-tetrahydro- $\beta$ -Naphthylamine, 530  
 Hasenoehtl (Dr. Fritz), Dielectric Constants of Liquid Nitrous Oxide and Nitrogen, 547  
 Haswell (Prof. W. A.), a Manual of Zoology, 559  
 Hatcher (J. B.), Sedimentary Rocks of Southern Patagonia, 432  
 Haydon (W. T.), a Fresh-water Chert from Asia Minor, 520  
 Hayes (Captain M. H.), Colour of Horses for Service in Hot Countries, 445  
 Hazen (Prof. H. A.), Death and Obituary Notice of, 398  
 Heat: the Conductivities of Mixtures, Dr. C. H. Lees, 118; Apparatus for Determining Heat required to Evaporate Steam from Saturated Salt Solutions, M. Trouton, 143; Boiling Temperature of Hydrocarbons, Prof. H. A. Hunnicke, 216; Cooling of a Body in Steady Air-blast, II., Prof. Mitchell, 238; Transformation Temperature of Quadratic and Orthorhombic Mercuric Iodide, D. Gerner, 239; Thermoelectric Properties of Mercury, Dr. W. Peddie and A. B. Shand, 286; Value of Internal Pressure in Equations of Van Waals and Clausius, Daniel Berthelot, 287; the Co-volume in Characteristic Equation of Fluids, Daniel Berthelot, 311; Hall Phenomenon and Thermomagnetic Currents, G. Moureau, 311; New Method of Measuring Thermal Sensibility, Ed. Toulouse and W. Vaschide, 336; Change with Temperature of Coefficient of Absorption of Gas in Liquid, Prof. Kuenen, 359; Specific Heat of Marble, Prof. B. O. Peirce and Robert W. Willson, 367; Freezing Points of Solutions, E. H. Loomis, 399; the Ionisation of Dilute Solutions at the Freezing Point, W. C. D. Whetham, 504; Limiting Value for Molecular Depression of Freezing Point in Non-electrolytic Solutions, Herr Loomis, 521; Use of Violuric Acid in Calorimetric Investigations, Prof. Abegg, 402; Stationary Temperature of Electrically Heated Conductor, F. Kohlrusch, 432; Thermodynamic Properties of Super-heated Steam, J. H. Grindley, 432; Sugar as Heat-producer in Fasting Animals, Prof. U. Mosso, 476; Effects of Strain on Thermo-electric Qualities of Metals, Prof. M. Maclean, 481; Electric Thermostat, Prof. J. Gibson and A. W. C. Menzies, 482; Underground Temperature, J. L. C. Rae, E. F. Pittman and Prof. T. W. E. David, 484; Hot Water and Soft Glass, C. Barus, 528; Electrical Thermostat, W. Duane and C. A. Lory, 528; Specific Heat of Blood, H. Bordier, 532; Solubility of Carbonic Acid in Alcohol at Various Temperatures, C. Bohr, 554; Specific Heats of Metals at Low Temperatures, U. Behn, 554; Heat of Sublimation of Carbonic Acid and of Evaporation of Air, U. Behn, 554; Heat for Advanced Students, Edwin Edser, 557; Influence of Heating on Passage of Electricity through Rarefied Gases, J. Stark, 572; Loss of Phosphorescence by Heat, Gustave le Bon, 579; Heat of Combination of Metals in Alloy Formation, Dr. A. Galt, 579; Mechanism of Gelation and Stability of Hydrosols, W. B. Hardy, 599; Movements Produced in Liquids by Heat Connection, Henri Bénard, 604; Heat of Formation of Hydrated and Anhydrous Strontium Dioxide, M. de Forcrand, 604; Size at which Heat-movements Manifested in Matter, Prof. G. F. Fitzgerald, F.R.S., 612; Heat of Combustion of some very Volatile Liquids, MM. Berthelot and Delépine, 627  
 Heather Beer, Dr. W. C. MacLagan, 286  
 Heavens at a Glance, the, Arthur Mee, 62  
 Heawood (E.), on the Date of the Discovery of Australia, 20  
 Hedley (Charles), is New Zealand a Zoological Region? 589  
 Heilprin (Angelo), Alaska and the Klondike: a Journey to the New Eldorado, with Hints to the Traveller, and Observations on the Physical History and Geology of the Gold Regions, the Conditions of Working the Klondike Placers, and the Laws Governing and Regulating Mining in the North-west Territory of Canada, 122  
 Heilprin (Prof. A.), the Level of Lake Nicaragua, 451  
 Heinke (C.), Wave Current Generators, 626  
 Hemming (G. W.), Billiards Mathematically Treated, 410, 468  
 Hemsalech (G. A.), Constitution of Electric Spark, 258; Influence of Iron on Discharge of Condenser through Induction Coil, 579  
 Hemsley (W. Botting, F.R.S.), the Students' Flora of New Zealand and the Outlying Islands, Thomas Kirk, 146; List of the Genera and Species of New Zealand Plants, A. Hamilton, 146

Henderson  
 motive  
 Henry (E.)  
 of Crim  
 Henry (M)  
 Herberso  
 Herdman  
 Confer  
 pool M  
 Oysters  
 Heredit  
 Fay, D  
 Enlistm  
 Hergesell  
 Héricourt  
 459  
 Hérissy (J  
 of Seed  
 Hero of a  
 Herrick  
 Herschel  
 of the  
 Hertwig  
 Mensc  
 Hertz Ex  
 Hewitt (C  
 190  
 Heycock  
 Heydwel  
 Hibbert  
 Hicks (J  
 109  
 Hickson  
 Hidden  
 Caroli  
 Highton  
 Hill (J.  
 Hill (R)  
 Jama  
 Hillier  
 Chem  
 Himalay  
 380  
 Hind (C  
 191  
 Hinde  
 142  
 Hinks  
 Hippoly  
 F. W  
 Histolo  
 schen  
 History  
 F. T  
 History  
 History  
 Hochg  
 G. E  
 Dodge  
 Hoff (J  
 Hoff  
 Dav  
 Hollan  
 Hollan  
 Holme  
 Holme  
 Cal  
 Holme  
 Holme  
 "Hor  
 Hopk  
 Hopk  
 Horn  
 Hors  
 Hors  
 581  
 Hors  
 Ha  
 Hors

- Henderson (Dr. John), Cadmium Cell as Standard of Electromotive Force, 483  
 Henry (E. R.), Finger-prints as a Method for the Identification of Criminals, 42  
 Henry (M.), New Reaction of Formaldehyde, 621  
 Herberston (A. J.), Atlas of Meteorology, 171  
 Herdman (Prof. W. A., F.R.S.), Stockholm International Conference on the Exploration of the Sea, 78, 177; Liverpool Marine Biology Committee's Memoirs, I., Ascidia, 126; Oysters and Disease, 587; Marine Zoology in Australia, 590  
 Heredity: Marriages of the Deaf in America, Edward Allen Fay, Dr. Macleod Yearsley, 97; Racial Aspect of Voluntary Enlistment, R. C. T. Evans, 200  
 Hergesell (Dr. H.), Recent International Balloon Ascents, 572  
 Héricourt (J.), Treatment of the Tuberculous by Zomotherapy, 459  
 Hérissey (H.), Soluble Ferments produced during Germination of Seeds with Horny Albumen, 287; Seminase, 384  
 Hero of Alexandria, W. Schmidt, 202  
 Herrick (C. J.), Nerve-components of Bony Fishes, 328  
 Herschel (Prof. A. S., F.R.S.), Contemporary Meteor-showers of the Leonid and Bielid Meteor-periods, 222, 271  
 Hertwig (O.), Die Elemente der Entwicklungslehre des Menschen und der Wirbelthiere, 610  
 Kertz Exciter, Experimental Study of, R. Swyngedauw, 507  
 Hewitt (J. T.), the Preparation of Benzeneazorthionitrophenol, 190  
 Heycock (C. T., F.R.S.), Gold Aluminium Alloys, 357  
 Heydweiller (A.), Moving Bodies in Electric Field, 190  
 Hibbert (Henri), Cacodylic Acid, 239  
 Hicks (Dr. Henry, F.R.S.), Death of, 84; Obituary Notice of, 109  
 Hickson (S. J., F.R.S.), Meduse of Millepora, 213  
 Hidden (W. E.), New Mode of Occurrence of Ruby in North Carolina, 93  
 Highton (H. P.), an Introduction to Qualitative Analysis, 514  
 Hill (J. P.), Embryology of Marsupials, 400  
 Hill (Robert T.), the Geology and Physical Geography of Jamaica, 237  
 Hillyer (H. W.), Experiments to Illustrate the Principles of Chemistry, 52  
 Himalayas, Western, the Air Movement at Simla and in the, 380  
 Hind (Dr. W.), *Palaemonito* in British Carboniferous Rocks, 191  
 Hinde (Dr. G. J., F.R.S.), Calcsponges from Victoria Eocene, 142  
 Hinks (A. R.), Reduction of Star Photographs, 355  
*Hippolyte varians*, the Colour-physiology of, F. W. Keeble and F. W. Gamble, 552  
 Histology, A. Koelliker's Handbuch der Gewebelehre des Menschen, 316  
 History of the Art of Experimenting, Dr. E. Gerland and Dr. F. Traummüller, 4  
 History of European Fauna, the, Dr. R. F. Scharff, 341  
 History, Oriental, from B.C. 850 to B.C. 330, 361  
 Hochgebirge der Erde, Die, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219  
 Hodges (Dr. J. F.), Death and Obituary Notice of, 184  
 Hoff (J. H. van 't), Leçons de Chemie Physique, 294  
 Hoff (van 't), Celebration at Rotterdam, the, Dr. H. M. Dawson, 321  
 Holland (T. H.), the Cause of the Darjeeling Landslips, 127  
*Holland Submarine Boat*, the, 135  
 Hollis (Dr. W. Ainslie), Dark Lightning Flashes, 7  
 Holman (Prof. Silas W.), Death of, 618  
 Holmes (W. H.), the Evidence as to Auriferous Gravel Man in California, 206  
 Holmes' Comet (1899 *d*), 17, 62, 87, 114, 137  
 Holmes' Comet (1899 *II*), 236  
 "Homing" Pigeon, the Orientation of the, E. de Cyon, 596  
 Hopkins (Dr. A. D.), Forest Fires and Insects, 327  
 Hopkins (F. G.), a Pure Proteid from Egg-white, 482  
 Horne (J.), the Silurian Rocks of Britain, vol. I., Scotland, 25  
 Horse-sickness, the African, Dr. R. Wallace, 235  
 Horse, a Surgical Operating Table for the, J. A. W. Dollar, 588  
 Horses, Colour of, for Service in Hot Countries, Captain M. H. Hayes, 445  
 Horst (Dr. R.), Peripatus in the Malay Peninsula, 31  
 Hose (C.), Native Life and Customs in Sarawak, 578  
 Hot Countries, Colour of Horses for Service in, Captain M. H. Hayes, 445  
 Howard (A.), on a Disease of *Tradescantia*, 66  
 Howe (R. H., jun.), the Birds of Rhode Island, 323  
 Howles (F.), Production of Nitric Acid from Air by Electric Flame, 507  
 Hudson (Rev. R.), a Daylight Meteor, 280  
 Hughes (Prof. D. E., F.R.S.), Death of, 302; Obituary Notice of, 325  
 Hugot (C.), Iodide of Nitrogen, 435  
 Huiles Essentielles, Essais des, Henri Labbé, 5  
 Human Nature, its Principles and the Principles of Physiognomy, 127  
 Hungaria, Opposition of Minor Planet (434), 453  
 Hunnicke (Prof. H. A.), Boiling Temperatures of Hydrocarbons, 216  
 Hunt (A. R.), Telephones and Lightning Discharges, 368; Lord Kelvin on the Origin of Granite, 391, 589  
 Hurricanes: the West Indian Hurricane of August 7-14, 1899, Prof. E. B. Garriott, 112; Hurricane Tracks, 1890-9, 112; Extirpation of a Species of Humming-bird by Hurricane, T. D. Pigott, 545  
 Hurter Memorial Lecture, the, Prof. G. Lunge, 92  
 Hussak (Dr. E.), Florencite, 119  
 Hutchins (D. E.), the Fitting of the Cycle to its Rider, 368  
 Hutchinson (A.), Stokesite, 119, 215  
 Hutchinson (Rev. H. N.), Primeval Scenes, being some Comic Aspects of Life in Prehistoric Times, 150  
 Huxley (Thomas Henry), the Scientific Memoirs of, 440  
 Hybrids, Law of Separation, H. de Vries, 556  
 Hydrography: Atlantic Deep-sea Soundings, R. E. Peake and Sir John Murray, 286; Water Temperatures of Mouth of English Channel, Mr. Garstang, 450; Tides along the Antarctic Continent, R. A. Harris, 490  
 Hydrometers, G. Guglielmo, 371, 421  
 Hygiene, Water-sterilisation by Ozone, Dr. Weyl, 65  
 Ice, Cave-, the Origin and Occurrence of, Dr. Hans Lohmann, 591  
 Ice Crystals, Tyndall's, 590  
 Ichthyology: Light-collecting Apparatus in Deep-sea Fish, Prof. Chun, 65; Rorqual Whale at Woolwich, 134; Polypterus and Protopterus, J. S. Budgett, 166; Nerve-components of Bony Fishes, C. J. Herrick, 328; Nasal Sacs in Flat-fish, H. M. Kyle, 358; the Fishes of North and Middle America: a Descriptive Catalogue of the Species of Fish-like Vertebrates found in the Waters of North America, North of the Isthmus of Panama, David Starr Jordan and Barton Warren Evermann, 362; Photography of Live Fish, Douglas English, 451  
 Ideas, General, Evolution of, Prof. Th. Ribot, 149  
 Illogicality concerning Ghosts, Kumagusu Minakata, 564  
 Illustrated History of Mathematics, J. Boyer, 510  
 Illustrations of Lepidoptera, H. J. Elwes, F.R.S., 468  
 Impact, J. H. Vincent, 507  
 Inadequacy of Cell-theory, Les Êtres Vivants, Paul Busquet, 609  
 Income, the Distribution of, by Prof. William Smart, Sir R. Giffen, F.R.S., 581  
 Index, General, by Robert Newstead, F.E.S., Curator of the Grosvenor Museum, Chester, to Annual Reports of Observations of Injurious Insects 1877-1898, Eleanor A. Ormerod, 126  
 India: Botany and the Indian Forest Department, Prof. W. Schlich, 6; the Indian Forest Service, W. F. Sinclair, 31; Indian Forest Insect-pests, E. P. Stebbing, 38; on the Primitive Rites of Disposal of the Dead as Illustrated by Survivals in Modern India, W. Crooke, 44; Snake-bite Cured by Calmette's Antivenene, Major S. J. Rennie, 85; Rinderpest and Serotherapy, 157; Displacements in Khasi and Garo Hills during Earthquake of June 1897, 206; the Indian University of Research, 260; a Descriptive Catalogue of the Indian Deep-sea Fishes in the Indian Museum, 291; an Account of the Deep-sea Brachyura: being Systematic Reports upon the Materials Collected by the Royal Indian Marine Survey Ship *Investigator*, A. Alcock, 291; Indian Tidal Forecasts, 303; Indian Anti-typhoid Inoculations, Prof. A. E. Wright, 327; Indian Meteorological Memoirs, 380; the Plague and Haffkine's Inoculations, 422; Haffkine's

- Anti-plague Inoculations, 550; Mineral Production in India, 500
- Indian Corn, Kumagusu Minakata, 392, 515; W. F. Sinclair, 445
- India-rubber, on, R. H. Biffen, 68
- Indications, Deceptive Bibliographic, F. A. Bather, 367
- Indicators and Test Papers, Alfred I. Cohn, 269
- Industrial Progress, Technical Instruction in Relation to, Prof. W. Ripper, 356
- Industrie, Essais du Commerce et de l', L. Cuniasse and R. Zwilling, 176
- Industrie des Matières Colorantes Azoïques, L', George F. Jaubert, 53
- Ingall (E. D.), Mineral Production of Canada in 1899, 545
- Ingham (W.), the Incrustation of Iron Water Pipes, 14
- Inner Corona, the Structure of the, Prof. S. P. Langley, *For. M.R.S.*, 443
- Innermost Asia, Ralph P. Cobbold, 495
- Inoculations, Anti-plague, 550
- Inorganic Chemical Preparations, Felix Lengfeld, 101
- Inorganic Chemistry for Advanced Students, Sir Henry E. Roscoe, *F.R.S.*, and Arthur Harden, 125
- Inorganic and Organic, a Manual of Chemistry, Dr. Arthur P. Luff and Frederick J. M. Page, 442
- Inorganic Evolution, the Methods of, Sir Norman Lockyer, *K.C.B.*, *F.R.S.*, 129, 296
- Insect Friends and Foes, Our: How to Collect, Preserve and Study Them, Belle S. Cragin, 342
- Insects as Carriers of Disease, Dr. G. H. F. Nuttall, 153
- Insects, Shadows of, Wm. Parkinson, 177
- Institution of Civil Engineers, 41
- Institution of Mechanical Engineers, 14
- Instrumentenkunde, Handbuch der Astronomischen, Dr. L. Ambronn, 241
- Integrals, Studies in, Rev. W. R. W. Roberts, 383; W. F. Sheppard, 459
- Interference Curves depending on Perspective, A. Mallock, 29
- Interference Method of Measuring Small Diameters, M. Maurice Hamy, 402
- Internal Stresses in Iron and Steel, Thos. Andrews, *F.R.S.*, 541
- International Committee of Weights and Measures, 350
- International Geography, the, Prof. T. G. Bonney, *F.R.S.*, 50
- Interrupters, Mercury Jet, 421; S. M. Kintner, 590
- Intramercutrial Planet, Search for an, Prof. W. H. Pickering, 479
- Invertebrata, Paleontology of, Prof. K. A. von Zittel, 608
- Investigation, the Position that Universities should take in regard to, 417
- Irish Academy, Royal, 143, 191, 383, 407, 507
- Iron and Steel, Internal Stresses in, Thos. Andrews, *F.R.S.*, 541
- Iron-smelting by Electricity, 618
- Irving (Rev. Dr. A.), the University of London Elections, 318
- Isle of Man, Similar Geological Structures in South Tyrol and the, Dr. Maria M. Gordon, 490
- Issel (Prof. A.), Barisäl Guns and Earthquakes, 60
- Italy, North, the Teaching of Geography in Switzerland and, Joan Berenice Reynolds, 126
- Jaboin (A.), the Crystallised Phosphides of Strontium and Barium, 96
- Jackson (H.), Jordanite and Rathite, 119; Researches in Sugar Group, 215; Formation of  $\alpha$ - and  $\beta$ -Acrose from Glycollic Aldehyde, 264
- Jamaica: Recent Changes in Fauna, Mr. Duerden, 157; Sea Fisheries of, Mr. Duerden, 157; the Geology and Physical Geography of Jamaica, Robert T. Hill, 237
- Jamieson (Prof. Andrew), the Action of Electric Tramways on Land End of Submarine Cables, 595
- Jansen (J.), Observations of the Leonids, 119
- Japan: Seismology in, Prof. Omori, 282; Chemical Industry in Japan, 421; Cina e Giappone, E. von Hesse Wartegg, 513
- Japp (F. R.), Isoamarine, 405; Amarine and Isoamarine, 119
- Jaubert (Dr. G. F.), L'Industrie des Matières Colorantes Azoïques, 53; Diazotising of Safranin, 483; Produits Aromatiques, Artificiels et Naturels, 563
- Jaubert (Joseph), Barometric Oscillations of February 13-19, 1899, 436
- Jeffery (Walter), the Naval Pioneers of Australia, 53
- Jenkin (B. M.), Electrical Equipment of Waterloo and City Railway, 85
- Jenner Institute of Preventive Medicine, Transactions of the (late British Institute of Preventive Medicine), 387
- Job, the Witness of Creation, Nature Sketches from the Book of, M. Cordelia Leigh, 466
- Jodin (Victor), Resistance of Seeds to High Temperatures, 144
- Johannsen (Prof. W.), Etherisation of Plants, 423
- Johnson (Prof. T.), the Yellow Potato Blight, 191
- Johnstone (J.), the Common Cockle, 372
- Joly (Prof. C. J.), Applications of Hamilton's Operator  $\nabla$  in Calculus of Variations, 191; Place of *Ausdehnungslehre* in Algebra of Quaternions, 407
- Jones (F. W.), Molecular Structure of Organised Bodies, 273
- Jones (H. O.), Oxalacetic Acid, 190
- Jordan (David Starr), the Fishes of North and Middle America: a Descriptive Catalogue of the Species of Fish-like Vertebrates found in the Waters of North America, North of the Isthmus of Panama, 362
- Jordan (Prof. Samson), Death of, 518; Obituary Notice of, 544
- Joteyko (J.), Work of Spinal Nervous Centres, 483
- Joubert (G. F.), Naphthopurpurin, 48
- Journiaux (M.), Interaction of Hydrogen and Silver Chloride, 643
- Journal of Botany, 46, 262, 603
- Journal of Royal Microscopical Society, 23, 262, 432, 602
- Jowett (H. H. D.), Jaborine, 505; Salinigrin, 627
- Jubilee of the Royal Meteorological Society, 565
- Judd (J. W.), New Mode of Occurrence of Ruby in North Carolina, 93
- Judd (Prof. John W., C.B., *F.R.S.*), the Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist and Zoologist, Professor in Yale University, Daniel C. Gilman, 409
- Jungfrau Electric Railway, the, 572
- Jupiter, Mercury and, as Morning Stars, 137
- Jupiter, Orbit of Fifth Satellite of, Prof. E. E. Barnard, 157
- Juritz (C. F.), Soils of S.W. Cape Colony, 436
- Kahlbaum (C.), the Distillation of Metals, 65
- Kahlbaum (Georg W. A.), Justus von Liebig und Christian Friedrich Schönbein, Briefwechsel, 1853-1868, 513
- Kangaroo, the Newly-born, D. le Souef, 423
- Kant (Immanuel), Dreams of a Spirit-seer, Illustrated by Dreams of Metaphysics, 563
- Kathode Rays, on the Carriers in the, W. B. Morton, 365
- Keane (A. H.), a Glimpse at Guatemala and some Notes on the Ancient Monuments of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, 292
- Keane (John), the Evolution of Geography, a Sketch of the Rise and Progress of Geographical Knowledge from the Earliest Times to the First Circumnavigation of the Globe, 317
- Kearton (R.), Our Rarer British Breeding Birds, their Nests, Eggs, and Summer Haunts, 323
- Keeble (F. W.), the Colour-physiology of *Hippolyte varians*, 552
- Keegan (P. Q.), Experiments on the Floral Colours, 105
- Keeler (Prof. J. E.), Predominance of Spiral Nebulae, 87
- Keiser (Dr. E. H.), Acetylene Derivatives, 215
- Kelvin (Lord), Attempt to Reconcile Apparently Opposite Mechanical Properties of the Ether, 166; the Spinning Top, 166; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589
- Kennedy (Wardlaw), Beasts: Thumbail Studies in Pets, 28
- Kent, Flora of, F. J. Hanbury and E. S. Marshall, 489
- Kerr (J. G.), Origin of Paired Limbs of Vertebrates, 166
- Kerr's Phenomenon, Researches on, MM. Abraham and Lemoine, 112
- Kew Gardens: List of Published Names of Plants introduced to Cultivation, 1876-1896, Kew Bulletin of Miscellaneous Information, Handbook of Tender Dicotyledons Cultivated in the Royal Gardens, Kew, Dr. Maxwell T. Masters, *F.R.S.*, 537
- Kizer (Hans), Zoology of Norwegian North Atlantic Expedition, 258
- Kinetic Theory of Gases, the, Dr. Oskar Emil Meyer, 289; Prof. G. H. Bryan, *F.R.S.*, 289; a Treatise on the Kinetic Theory of Gases, S. H. Burbury, 289; Prof. G. H. Bryan, *F.R.S.*, 289

- King (F. H.), the Movements of Ground-water, 601  
King (L. W., F.S.A.), Babylonian Religion and Mythology, 437  
Kingsmill (Thos. W.), Leonid Meteor Showers, 491  
Kintner (S. M.), Mercury Jet Interrupters, 590  
Kipping (F. S.), Isomeric partially Racemic Salts containing Quinquevalent Nitrogen, 505; New Syntheses of Indene, 505, 547; Iodonium Compounds, 506; Decomposition of Semicarbazones, 506  
Kirk (Thomas), the Students' Flora of New Zealand and the Outlying Islands, W. Botting Hemsley, F.R.S., 146  
Klein (Dr. E., F.R.S.), System der Bakterien, Dr. W. Migula, 464  
Klempers (Prof.), Justus von Liebig and Medical Science, 63  
Kling (André), Biochemical Oxidation of Propylglycol, 239  
Klondike, Alaska and the, Angelo Heilprin, 122  
Knapp (Dr. S. A.), Rice Culture in U.S.A., 401  
Knibbs (G. H.), the Prismoidal Formula, 167  
Knopf (Herr Otto), New Minor Planet (1899 EY), 283  
Knott (Dr. C. G.), Magnetic Screening, 482  
Knowledge-making, the Utility of, as a means of Liberal Training, Prof. J. G. Macgregor, 159; G. H. Wyatt, 274  
Knuth (Prof. Paul), Death of, 110; Obituary Notice of, 205  
Kobelt (Dr. W.), Studien zur Geographie, 99; Dr. W. Kobelt and the Mediterranean Fauna, Prof. Henry H. Giglioli, 227; the Reviewer, 227  
Koch (K. R.), Vibrations of Gun Barrels, 58  
Koelliker's (A.), Handbuch der Gewebelehre des Menschen, 316  
Koeltitz (Dr.), Antarctic Exploration, 19  
Kohlrausch (Dr. F.), Kleiner Leitfaden der Practischen Physik, 200; Stationary Temperature of Electrically Heated Conductor, 432  
Kohn (L.), True Molecular Weight of Gaseous Sulphur, 373  
König (R.), Highest Audible and Inaudible Notes, 190  
Köppen (W.), Grundlinien der Maritimen Meteorologie, 101  
Kranz (C.), Vibrations of Gun Barrels, 58  
Kuenen (Prof.), a Simple Proof of Gibbs' Phase Rule, 359; Change with Temperature of Coefficients of Absorption of Gas in Liquid, 359  
Kyle (H. M.), Proposals of the Stockholm Fisheries Conference, 151; Nasal Sacs in Flat Fish, 358  
Laar (J. A. van), Application of Thermodynamics to Ramsay and Shields' Results upon Association of Liquids, 283  
Labbe (Henri), Essais des Huiles Essentielles, 5  
Laboratories: Laboratory Outline of General Chemistry, Alexander Smith, 27; Laboratory Manual, Experiments to Illustrate the Principles of Chemistry, H. W. Hillyer, 52; Substitute for Gas in Laboratories, William Gannon, 128; Biological Lectures from the Marine Biological Laboratory, Wood's Holl Massachusetts, 1898, 244; Laboratory Note-book for Chemical Students, Prof. Vivian B. Lewes and J. S. S. Brame, 412; Hartley Botanical Laboratories of University College, Liverpool, 454  
Lachlan (R.), the Elements of Euclid, 176  
Lacroix (A.), the Crystalline and Volcanic Rocks of Southern China, 359; Pseudo-Chalcedonite, 407  
Laer (M. van), the Bacillus of "Double-face" Disease in Beer, 287  
Laird (L. R.), Magnetic Viscosity, 432  
Lake, a Canadian, of Subterranean Inflow, Andrew T. Drummond, 128  
Lake Callabonna, Fossil Remains of, 275  
Lake Nicaragua, the Level of, Prof. A. Heilprin, 451  
Lamb (Prof. Horace, F.R.S.), Geometrical Representation of Relation between Wave-velocity and Group-velocity, 286  
Lamplugh (G. W.), Effect of Earth-movement on Carboniferous Volcanic Rocks of Isle of Man, 285; Rock-structures in Isle of Man and South Tyrol, 612  
Lander (G. D.), Mixture of Dry Silver Oxide and Alkyl Halides as an Alkylating Agent, 335; Alkylation by means of Dry Silver Oxide and Alkyl Iodides, 627  
Landolt (Dr. H.), Optical Activity and Chemical Composition, 269  
Landslips, the Cause of the Darjeeling, T. H. Holland, 127  
Langley (Prof. S. P., For. M.R.S.), the Structure of the Inner Corona, 443; Rock-salt as a Refraction-standard, 545; the Protection of Wild Animals in America, 617  
Lankester (Mrs.), Death of, 593  
Lankester (Prof. E. R., F.R.S.), Significance of Increased Size of Cerebrum in Recent as compared with Extinct Mammalia, 624  
Lapworth (A.), Action of Fuming Nitric Acid on  $\alpha$ -dibromocamphor, 335; Acids obtained from  $\alpha$ -dibromocamphor, 505  
Lapworth (Herbert), the Silurian Sequence of Rhayader, 143  
Larroque (Firmin), Mechanism of Hearing, 311  
Larsen (A.), Electric Conductivity of Dilute Amalgams, 432  
Lassarbohn (Prof. Dr.), Einführung in die Chemie in leichtfasslicher Form, 51  
Latham (B.), Climatic Conditions of Plague, 214  
Latitude-variations, Study of, Jean Boccardi, 383  
Latitude, Variation of, Prof. Th. Albrecht, 574  
Latter (Oswald H.), Birds Capturing Butterflies, 56  
Lattermann (Dr.), the Colloid Metals, 64  
Lattes (E. C.), the Etruscan Numerals, 371  
Laurent (E.), Mistletoe-distribution in Belgium, 520  
Lawrence (H. E.), Magnetic Qualities of Building Brick, 421  
Le Bon (Gustave), Loss of Phosphorescence by Heat, 579  
Le Chatelier (H.), Changes in Volume accompanying hardening of Hydraulic Currents, 239  
Le Sueur (H. R.), Constitution of Fatty Acids, ii., 190  
Lead and Silver, the Metallurgy of, Henry F. Collins, 198  
Lebeau (Henri), Density and Analysis of Sulphur Perfluoride, 603  
Lebeau (P.), Preparation of Arsenides, 435; Sulphur Perfluoride, 579  
Lecarme (Léon and Louis), Wireless Telegraphy between Chamounix and Mt. Blanc, 280  
Lecher (E.), a Fallacy in Electrical Doctrine, 262  
Leclère (M.), the Crystalline and Volcanic Rocks of Southern China, 359  
Lecomte (Henri), Les Arbres à Gutta-percha, leur Culture. Mission Relativ à l'acclimatation de ces Arbres aux Antilles et la Guyane, 538  
Lees (Dr. C. H.), the Thermal Conductivities of Mixtures, 118; the Production of Electrolytic Copper, 392  
Lefebvre (P.), Action of Amyl Chloride on Calcium Carbide, 604  
Lefèvre (Prof. Julien), La Liquéfaction des Gaz et ses Applications, 98  
Lehfeldt (Prof.), the Osmotic Pressure Analogy, 453  
Leidicé (E.), Anhydrous Sesquichlorides of Rhodium and Iridium, 239; the Rhodio-cyanides, 288  
Leigh (M. Cordelia), The Witness of Creation: Nature Sketches from the Book of Job, 466  
Leiss (C.), Die Optischen Instrumente der Firma R. Fuess, deren Beschreibung, Justierung und Anwendung, 241  
Leloutre (G.), L'Échappement dans les Machines à Vapeur, 563  
Lemoine (J.), Researches on Kerr's Phenomenon, 112; Time of Establishing Electric Spark, 360; Instantaneous Disappearance of Rotatory Polarisation, 435  
Lenard (O.), Absorption of Light in Electrically Glowing Gases, 627  
Lendenfeld (Robert von), Die hochgebirge der Erde, 219  
Lengfeld (Felix), Inorganic Chemical Preparations, 101  
Lenses, Obliquely crossed Cylindrical, Prof. S. P. Thompson, 164; Exact Formulæ for, T. H. Blakesley, 165  
Leonid Meteors, 374; Dr. G. Johnstone Stoney, F.R.S., 28, 82; Dr. A. M. W. Downing, F.R.S., 28; W. F. Denning, 81; M. Loewy, 119; M. J. Janssen, 119; J. Guillaume, 143; C. H. Trépied, 143; Harold Tarry, 143; Thos. W. Kingsmill, 491; Supposed Daylight Leonids, W. F. Denning, 152; Contemporary Meteor-showers of the Leonid and Bielid Meteor-periods, Prof. A. S. Herschel, F.R.S., 222, 271  
Lepcha Language, Dictionary of the, General G. B. Mainwaring, 442  
Lepidoptera: Ueber einige Aberrationen von Papilio Machaon, Dr. J. W. Spengel, 316; Illustrations of Lepidoptera, H. J. Elwes, F.R.S., 468; Bulgarian Lepidoptera, H. J. Elwes, 627  
Lepinay (J. M. de), Mass of Cubic Decimetre of Water, 71  
Leteur (F.), Detection of Silver in presence of Mercury Amido-chloride, 360  
Levy (Michel), the Crystalline and Volcanic Rocks of Southern China, 359  
Lewes (Prof. Vivian B.), Laboratory Note-book for Chemical Students, 412  
Lewis (A. L.), Stone Circles in Scotland, 530

- Lewis (P.), Influence of Impurities on Gaseous Spectrum, 93  
 Lewis (W. J.), A Treatise on Crystallography, 485  
 Lewkowitsch (J.), the Theory of Saponification, 94  
 Liais (Emmanuel), Death and Obituary Notice of, 450  
 Lieben (Prof.), the Aldoles, 64  
 Liebig (Justus von) and Medical Science, Prof. Klemperer, 63;  
 Justus von Liebig and Christian Friedrich Schönbein, Briefwechsel, 1853-1868, Georg W. A. Kahlbaum und Eduard Thon, 513  
 Liebknecht (O.), Molecular Susceptibility of Paramagnetic Salts of Iron Group and of Salts of Rare Earths, 432  
 Lie's Theory of Continuous Groups, the Chief Theorem of, S. E. Slocum, 572  
 Life and Happiness, Auguste Marrot, 365  
 Life under other Conditions, Geoffrey Martin, 452  
 Light, Kinematical Theory of Propagation of, M. Sagnac, 136  
 Light Curve of Ceraski's First Algol Variable, 355  
 Lighthouse Apparatus, Modern, Dr. J. A. Purves, 393  
 Lightning: Dark Lightning Flashes, Dr. W. Ainslie Hollis, 7, Dr. W. J. S. Lockyer, 7; on the Cause of Dark Lightning and the Clayden Effect, Prof. R. W. Wood, 104; Lightning and Wire Fences, F. J. Brodie, 257; the Effects of Lightning upon Electric Lamps, Sydney Webb, 343; Sir G. G. Stokes, Bart., F.R.S., 343, 413, 539; Prof. R. W. Wood, 391; Telephones and Lightning Discharges, A. R. Hunt, 368  
 Lindgren (W.), Mining Districts of Idaho Basin, 600; Granodiorite, 626  
 Linnean Society, 94, 142, 213, 264, 358, 406, 458, 506, 555, 627  
 Lippmann (Prof. G.), Unités Électriques Absolues, 539  
 Lippmann's Photography, a Fault in, O. Wiener, 93  
 Liquefaction of Gases: the Rise and Development of the Liquefaction of Gases, Willett L. Hardin, 98; La Liquéfaction des Gaz et ses Applications, Prof. Julien Lefevre, 98  
 Liquid Air as Anesthetic, Dr. A. C. White, 258  
 Liquids: Application of Thermodynamics to Ramsay and Shields' Results upon Association of Liquids, J. A. van Laar, 283; New Formula for Ostwald's Dilution Law, Dr. W. D. Bancroft, 303; Surface Tension of some Organic Liquids, Paul Dutoit and Louis Friderich, 383; Surface Tension Experiment, C. E. S. Phillips, 481  
 Little (Charles E.), Cyclopædia of Classified Dates, 513  
 Liveing (Prof.), Absorption Spectra of Solutions of Didymium and Erbium Salts, 214  
 Liverpool Marine Biology Committee's Memoirs, I. Ascidia, Prof. W. A. Herdman, F.R.S., 126  
 Liverpool School of Tropical Diseases, 342  
 Liverpool, Hartley Botanical Laboratories of University College, 454  
 Lloyd (A. B.), In Dwarf Land and Cannibal Country, a Record of Travel and Discovery in Central Africa, 314  
 Lloyd (Captain), Method which has been Developed at Elswick for Discharging Torpedoes below Water from the Broadside of a Ship when Steaming at a High Speed, 21  
 Lockyer (Sir Norman, K.C.B., F.R.S.), On the Distribution of the Various Chemical Groups of Stars, 8; the Great Paris Telescope, 178; the Piscian Stars, 213; the Eclipse Expedition at Vizidurg, 229, 249; Spectrum of Silicon, 262; Preliminary Table of Wave-lengths of Enhanced Lines, 262  
 Lockyer (Dr. William J. S.), Dark Lightning Flashes, 7; the November Meteors, 132; Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the pursuit of Celestial Photography, Dr. Isaac Roberts, F.R.S., 533  
 Locust Plague in New South Wales, the, W. W. Froggart, 620  
 Lodge (Prof. Oliver), the Controversy on Volta's Contact-force, 382  
 Loewy (M.), Observations of the Leonids, 119  
 Logarithms: to Calculate a Simple Table of, Dr. Arthur Dufton, 415; Prof. John Perry, F.R.S., 415; Mechanical Method of Calculating Logarithms, H. C. Pocklington, 469  
 Lohmann (Dr. Hans) the Origin and Occurrence of Cave-Ice, 591  
 Lommel (Eugene), Text-book of Experimental Physics, 557  
 London: the University of London, 492; Representation of the University of London, 275; London University Election, 299, 324, 369; Rev. Dr. A. Irving, 318  
 Long Focus Photographic Telescope, 41  
 Longevity and Mental Work, Prof. R. Manterola, 400  
 Lönnberg (Dr. Einar), Onohippidium, 579; the Greenland Musk Ox, 458  
 Loomis (E. H.), Freezing Points of Solutions, 399; Limiting Value for Molecular Depression of Freezing Point in Non-electrolytic Solutions, 521  
 Lorenz (L.), Ouvres Scientifiques de, Revues et Annotées, H. Valentinier, 465  
 Lory (C. A.), Electrical Thermostat, 528  
 Lowe (Dr. E. J., F.R.S.), Death and Obituary Notice of, 498  
 Lowerison (Harry), Field and Folklore, 102  
 Lownds (L.), Reflection and Transmission of Electric Waves along Wires, 334  
 Loyer (Marie), Ovarian Follicle of Reptiles, 287  
 Lucas (W. J.), British Dragon Flies, 418  
 Lucet (M.), a New Pathogenic *Mucor*, 192  
 Luff (Dr. Arthur P.), a Manual of Chemistry, Inorganic and Organic, 442  
 Lukchun Depression (Central Asia), the, General Tillo, 328  
 Luke (W. G.), the Rolling of Ships, 371  
 Lunge (Prof. G.), Impending Changes in the General Development of Industry, and particularly in the Alkali Industry, 92  
 Lupins: the Culture of White Lupins, P. P. Dehérain and C. Demoussy, 287; Culture of Blue Lupins, P. P. Dehérain and E. Demoussy, 435  
 Luther (Dr. C. T. R.), Death of, 449; Obituary Notice of, 473  
 Lynn (W. T.), Difficulties of the Calendar, 493  
 Lyra, Central Star of Ring Nebula in, W. Stratonoff, 260  
 MacBride (Prof. T. H.), the North American Slime Moulds, 173  
 McClelland (J. A.), Conductivity of Gas near Incandescent Wire, 95  
 McConnell (F. V.), Zoology of Mt. Roraima, 406  
 McCormick (L. J.), Death and Obituary Notice of, 476  
 McDougall (Alexander), Death of, 84  
 McDougall (A.), Production of Nitric Acid from Air by Electric Flame, 507  
 MacDowall (Alex. B.), Compensation in Weather, 295; a Curious Fact about London Summers, 627  
 Macfadyen (Dr. Allan), on the Influence of Temperature of Liquid Air on Bacteria, 529, 603  
 McGee (Prof. W. J.), Primitive Mathematics, 259  
 Macgregor (Prof. I. G.), the Utility of Knowledge-making as a Means of Liberal Training, 159  
 MacIver (D.), on Recent Anthropometrical Work in Egypt, 43  
 Mack (K.), Strains in Rupert's Drops, 262  
 McKendrick (Dr. J. S.), the Zymolysis of Tissues, 238  
 MacLagan (Sir A. D.), Death and Obituary Notice of, 571  
 MacLagan (Dr. W. C.), Heather Beer and Birch Ale, 286  
 Maclean (Prof. M.), Effects of Strain on Thermo-electric Qualities of Metals, 481  
 McMahon (Lieut.-General C. A., F.R.S.), Geology of Gilgit, 539  
 McMurtrie (Kenneth), an Interesting Case of Resonance, 445  
 Maercker (Prof.), Progress of Agricultural Chemistry, 116  
 Magnetism: Some Remarks on Radiation Phenomena in a Magnetic Field, Prof. Thomas Preston, F.R.S., 11; Influence of Magnetic Field on Radiation of Radio-active Bodies, H. Becquerel, 192; Magnetic Properties of Iron and Aluminium Alloys, Dr. S. W. Richardson, 23; Magnetic Properties of Aluminium, Nickel and Tungsten Steels, Prof. Barrett, 23; Spasms in Earth's Magnetic Force, Dr. W. van Bemmelen, 72; Magnetism and Electricity, J. Paley Yorke, 102; Magnetism and Electricity for Beginners, H. E. Hadley, 200; Magnetic Deflection of Kathode Rays, E. Wiechert, 262; Magnetic Deflection of Becquerel Rays, F. Giesel, 262; Action of Magnetic Field on Becquerel Rays, P. Curie, 287; Penetration of Becquerel Rays which are not deviable in Magnetic Field, Mme. Curie, 287; Hall Phenomenon and Thermomagnetic Currents, G. Moreau, 311; Radium and Polonium Rays in Magnetic Field, Henri Becquerel, 355; Dispersion of Radium Rays in Magnetic Field, Henri Becquerel, 407; Polarised Light in Magnetic Field, R. Dongier, 360; the Evoy Compass, 398; Cause of the Hall Effect, G. Moreau, 407; Asymmetrical Change in Spectral Lines of Iron radiating in Magnetic Field, Dr. P. Zeeman, 408; Magnetic Qualities of Building Brick, G. A. Gage and H. E. Lawrence, 421; Magnetic Viscosity, L. R. Laird, 432; Instantaneous Disappearance of Rotatory Polarisation, H. Abraham and J. Lemoine, 435; Magnetic Disturbances in Isle of Skye, Alfred Harker, 459; Magnetic

- Screening, Dr. C. G. Knott, 482; Vector Diagrams, Dr. C. Chree, F.R.S., 490; Magnetic Space Telegraphy, Syntony, P. E. Shaw, 529; Velocity of Propagation of Electromagnetic Waves in Bitumen, C. Gutton, 579
- Mahalanobis (Dr.), a New Myograph, 238
- Maillard (L.), a Crystallised Fibrine, 336
- Mainwaring (General G. B.), the Dictionary of the Lepcha Language, 442
- Maitland (A. G.), Geology of Western Australia, 259
- Makarov (Admiral), Account of the Trial Trip of the great Russian Ice-breaker *Yermak*, 17
- Malaria: Report of the Malaria Expedition to Sierra Leone, 614; Mosquitoes and Malaria, Dr. R. Hanitsch, 177; Major Ronald Ross, 522
- Malay Peninsula, Peripatus in the, Dr. R. Horst, 31
- Mallet (F. R.), Sulphates of Form  $R_2SO_4 \cdot 2MSO_4$ , 190
- Mallock (A.), Interference Curves depending on Perspective, 29
- Mammalia: Significance of Increased Size of Cerebrum in Recent as compared with Extinct Mammalia, Prof. E. R. Lankester, F.R.S., 624
- Man in California, the Evidence as to Auriferous Gravel, W. H. Holmes, 206
- Man, the Microcosm, Leonard Hall, 6
- Man, the Races of, an Outline of Anthropology and Ethnography, J. Deniker, Prof. A. C. Haddon, F.R.S., 462
- Manchester Literary and Philosophical Society, 47, 70, 95, 143, 286, 358, 383, 435, 507, 579; Prize Awards, 397
- Mangabeira Rubber, 38
- Manley (J. J.), Optical Method of Determining Density of Sea-water, 286
- Manora Observatory, Planetary Work at the, 574
- Manterola (Prof. R.), Longevity and Mental Work, 400
- Manual Training: Woodwork. The New Education, Richard Wake, 53
- Maples (Chauncy, D.D.), late Bishop of Likoma, Lake Nyasa, Journals and Papers of, 294
- Maquenne (Prof. L.), Les Sucres et leurs Principaux Dérivés, 461
- Marble, Specific Heat of, Prof. B. O. Peirce and Robert W. Willson, 367
- Marcel (Dr. William, F.R.S.), Death of, 475; Obituary Notice of, Dr. F. W. Tunnicliffe, 497
- Marconi (G.), Wireless Telegraphy, 377
- Marconi's Wireless Telegraphy in U.S.A., 185; in the War, 350
- Marett (R. R.), on Pre-animistic Religion, 44
- Marie (Ch.), Estimation of Phosphorus in Organic Compounds, 96; Electrolytic Estimation of Lead in Lead Sulphate and Chromate, 604
- Marine Biology: The Stockholm Fisheries Conference on the Exploration of the Sea, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; Geo. Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413; Some Recent Work of the Marine Biological Association, 79; Liverpool Marine Biology Committee's Memoirs, I. Ascidia, Prof. W. A. Herdman, F.R.S., 126; a Great Salt Lake Problem, 204; Meduse of Millepora, S. J. Hickson, F.R.S., 213; the Structure of Porites, H. M. Bernard, 213; Biological Lectures from the Marine Biological Laboratory, Wood's Holl, Massachusetts, 1898, 244; Ancestry of Heliporide (the Blue Coral), J. W. Gregory, 311, 555; Trawling in Pacific, A. Agassiz, 529; Report of the Marine Biologist for the Year 1898. Cape of Good Hope Department of Agriculture, E. J. Allen, 562
- Marine Zoology in Australia, Prof. W. A. Herdman, F.R.S., 590
- Marion (M.), Death of, 302; Obituary Notice of, 352
- Maritime Meteorology: Grundlinien der Maritimen Meteorologie, W. Köppen, 101
- Maronneau (G.), Phosphides of Iron, Nickel, Cobalt, and Chromium, 483
- Marr (John E., F.R.S.), the Scientific Study of Scenery, 441
- Marriages of the Deaf in America, Edward Allen Fay, Dr. Macleod Yearsley, 97
- Marrot (Auguste), Life and Happiness, 365
- Marsh (J. E.), Action of Sulphuric Acid on Fenchone, 94
- Marshall (E. S.), Flora of Kent, 489
- Marshall (Dr. Hugh), Action of Silver Salts on Solution of Ammonium Persulphate, 483
- Marsupials, Embryology of, J. P. Hill, 400
- Martel (E. A.), Deepest known Natural Well, 192
- Martin (Geoffrey), Life under other Conditions, 452
- Mason (Dr. O. T.), Aboriginal Stone-work in Porto Rico, 40
- Maspero (G.), the Passing of the Empires, 361
- Massee (George), Origin of Basidiomycetes, 358
- Masselin (E. J.), Outlines of Bacteriology, 221
- Massey (Wm. H.), the Fitting of the Cycle to its Rider, 391
- Massoulier (P.), Relations between Electrolytic Conductivity and Internal Friction of Saline Solutions, 531
- Masters (Dr. Maxwell T., F.R.S.), List of Published Names of Plants introduced to Cultivation, 1876-1896. Kew Bulletin of Miscellaneous Information, 537; Handbook of Tender Dicotyledons Cultivated in the Royal Gardens, Kew, 537
- Materia Medica: an Introduction to the Study of, Henry G. Greenish, 174; Atlas de Photomicrographie des Plantes Médicinales, Drs. Braemar et Suis, 539
- Materials, the Strength of, Prof. J. A. Ewing, F.R.S., 197
- Mathematics: Interference Curves depending on Perspective, A. Mallock, 29; American Journal of Mathematics, 46, 457; Elementary Practical Mathematics, Frank Castle, 53; Solution of the Quartic, Prof. G. B. Mathews, F.R.S., 55; Mass of Cubic Decimetre of Water, MM. Fabry, Lepinay and Pérot, 71; Death and Obituary Notice of Prof. Francis Guthrie, 84; Bulletin of the American Mathematical Society, 93, 213, 404, 554, 577; Transactions of, 504; Mathematical Society, 94, 286, 434, 579; Practical Plane and Solid Geometry, J. Harrison and G. A. Baxandall, 101; the Proposed Changes in the Cambridge Mathematical Tripos, 106; Prof. G. H. Bryan, F.R.S., 346; Edinburgh Mathematical Society, 166, 286, 435, 507; Valve Motions of Engines, Prof. John Perry, F.R.S., 152; the Spinning-top, Lord Kelvin, 166; the Prismoidal Formula, G. H. Knibbs, 167; Applications of Hamilton's Operator  $\nabla$  in Calculus of Variations, Prof. C. J. Joly, 191; Primitive Mathematics, L. Frobenius, 259; Prof. W. J. McGee, 259; Death of J. B. Stallo, 279; Exercices d'Arithmétique, G. G. Chevreul and J. Fitz-Patrick, 314; the Etruscan Numerals, E. E. Lattes, 371; Studies in Integrals, Rev. W. R. W. Roberts, 383; W. F. Sheppard, 459; Abhandlung der Dynamik, D'Alembert, 390; Ueber die Mathematische Theorie der Electrodynamischen Induction, Ricardo Felici, 390; the Simply Transitive Primitive Groups, Dr. G. A. Miller, 404; Place of Ausdehnungslehre in Algebra of Quaternions, Prof. C. J. Joly, 407; Billiards Mathematically Treated, G. W. Hemming, 410, 468; S. H. Burbury, F.R.S., 410; Death of Prof. E. Beltrami, 449; Obituary Notice of, Prof. G. H. Bryan, F.R.S., 568; Vector Diagrams, Dr. C. Chree, F.R.S., 490; Mathematical Contributions to Theory of Evolution, VIII., Karl Pearson, 505; Histoire des Mathématiques, J. Boyer, 510; Death of Joseph Bertrand, 544; Obituary Notice of, Prof. G. H. Bryan, F.R.S., 614; Cyclical Quartic Surfaces in Space of  $n$  dimensions, Dr. V. Snyder, 554; Proof of Galois Field of Order  $p^r$  for every integer  $r$  and prime number  $p$ , Prof. Dickson, 554; the Chief Theorem of Lie's Theory of Continuous Groups, 572; Equation-solving Machine, Georges Meslin, 579; Practical Mathematics, by Prof. John Perry, F.R.S., Prof. A. G. Greenhill, F.R.S., 582; Death and Obituary Notice of J. J. Walker, F.R.S., 618
- Mather (Mr.), Use of Price's Guard Wire in Insulator Tests, 334
- Mathew (John), Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, 193
- Matrucho (L.), Effect of Cold on Plant-nuclei, 531
- Matthews and Goode (Messrs.), on the Admiralty Harbour Works at Dover, 20
- Maudslay (Anne Carey and Alfred Percival), a Glimpse at Guatemala and Some Notes on the Ancient Monuments of Central America, 292
- Mauritius, Meteorology in, 303
- Mawley (E.), Phenological Observations for 1899, 434
- Maycock (W. Perren), Electric Wiring, Fittings, Switches and Lamps, 562
- Mazé (M.), Digestion of Reserves in Seeds during Germination, 407
- Mead (C. E.), *Collops* Beetle feeding on Larva of Colorado Potato-beetle, 328
- Measures, International Committee of Weights and, 350

- Measures (Dr. J. W.), the Zeiss Photo-micrographic and Projection Apparatus, 506
- Measuring Small Diameters, Interference Method of, M. Maurice Hamy, 402
- Mechanics: Institution of Mechanical Engineers, 14; Resistance of Certain Forms of Shafting to Torsion, and effect of Keyways thereon, L. N. G. Filon, 93; a Friction Dynamometer, Prof. W. E. Dalby, 165; the Strength of Materials, Prof. J. A. Ewing, F.R.S., 197; Newton's Laws of Motion, Prof. P. G. Tait, 265; the Torsional Constants of Iron and Steel, Dr. Peddie, 359; a Simple Proof of Gibbs' Phase Rule, Prof. Kuennen, 359; Apparatus for Measuring Extension of Wires, G. F. C. Searle, 459; Law of Elastic Fatigue, Dr. W. Peddie, 482; Impact, J. H. Vincent, 507
- Medd (John C.), Rural Education, 55
- Median Value of a System of Normal Variants from Two of its Centiles. A Geometric Determination of the, Dr. Francis Galton, F.R.S., 102
- Medicine: Justus von Liebig and Medical Science, Prof. Klemperer, 63; an Introduction to the Study of Materia Medica, Henry G. Greenish, 174; Death and Obituary Notice of Sir Richard Thorne Thorne, K.C.B., F.R.S., 183; the Relation between Science and Medicine, Sir J. Burdon-Sanderson, Bart., 254; Dictionnaire des Termes de Médecine, Français-Anglais, H. de Méric, 270; Death and Obituary Notice of Sir T. G. Stewart, 352; Death and Obituary Notice of Dr. William Marcet, F.R.S., Dr. F. W. Tunnicliffe, 497; a System of Medicine by many Writers, Edited by Prof. T. C. Allbutt, F.R.S., Dr. F. W. Tunnicliffe, 584; Death and Obituary Notice of Sir William Priestley, 593
- Mediterranean Fauna, Dr. W. Kobelt and the, Prof. Henry H. Giglioli, 227; the Reviewer, 227
- Medusa of Millepora, S. J. Hickson, F.R.S., 213
- Mee (Arthur), the Heavens at a Glance, 62
- Melbourne Meeting of the Australasian Association, the, 494
- Meldola (Prof. R., F.R.S.), Rural Education, 55; the Letters of Faraday and Schönbein 1836-1862, with Notes, Comments, and References to Contemporary Letters, 337; Les Sucres et leurs principaux Dérivés, Prof. L. Maquenne, 461
- Melle (M. van), New Theory of Smells, 240
- Melville (J. C.), Mollusca of Kolguev and Franz Josef Land, 143
- Memoirs of Novorossian Society, 262
- Memoirs of St. Petersburg University Society of Naturalists, 285
- Memory Image, Relative Fidelity of, Dr. I. M. Bentley, 60
- Mental Work and Longevity, Prof. R. Manterola, 400
- Menzies (A. W. C.), Electric Thermostat, 482
- Mercury in New South Wales, 15
- Mercury Jet Interrupters, 421; S. M. Kintner, 590
- Mercury as a Naked Eye Object, W. F. Denning, 431
- Mercury, Photometric Observations of, during Solar Eclipses, Dr. G. Müller, 574
- Mercury and Jupiter as Morning Stars, 137
- Méric (H. de), Dictionnaire des Termes de Médecine, Français-Anglais, 270
- Meridian of Universal Time, 158
- Merogenic Impregnation, Yves Delage, 24
- Merrimann (Prof. Mansfield), Elements of Precise Surveying and Geodesy, 77
- Meslin (Georges), Equation-solving Machine, 579
- Mesopodion, the Rostrum of, Dr. Henry O. Forbes, 490
- Metal, Theory and Practice of Art Enamelling upon, Henry Cunyngham, 466
- Metal Work as a Form of Manual Instruction in Schools, Prof. W. Ripper, 356
- Metallurgy: Metallurgy of Lead and Silver, Henry F. Collins, 198; Handbook of Metallurgy, Dr. Carl Schnabel, W. C. Roberts-Austen, K.C.B., F.R.S., 199; Armour Plates, R. A. Hadfield, 301; Improvements in Production of Electrolytic Copper, S. Cowper-Coles, 371; Death and Obituary Notice of Prof. S. Jordan, 518; Iron-smelting by Electricity, 618
- Meteorology: a Photograph of Clouds, Lieut.-General Tennant, 14; Weather Averages in British Isles for September quarter, 1866-99, 15; Meteorological Extremes, II., Temperature, G. J. Symons, 22; Symons's Monthly Magazine, 22, 238, 310, 457, 627; Cape of Good Hope Meteorological Report, 1898, 39; Suggestions for Diagrammetrical Depiction of Seasons of Drought and Rainfall, H. Deane, 47; the Effect of Weather on Every-day Life, Edwin Grant Dexter, 56; Barisal Guns and Earthquakes, Prof. A. Issel, 60; Barisal Guns, Henry S. Schurr, 127; March Weather in United States, O. L. Fassig, 93; Results of International Work for U.S.A., F. H. Bigelow, 190; Grundlinien der Maritimen Meteorologie, W. Köppen, 101; the West Indian Hurricane of August 7-14, 1899, Prof. E. B. Garriotti, 112; Hurricane Tracks, 1890-9, 112; Diurnal Variation of Barometer in British Isles, R. H. Curtis, 119; Meteorological Society, 119, 214, 311, 434, 555; the Diurnal Variations of Atmospheric Electricity, A. B. Chauveau, 136; Current Papers, H. C. Russell, F.R.S., 167; Atlas of Meteorology, J. G. Bartholomew and A. J. Herbertson, 171; Meteorology at the Berlin Geographical Congress, A. Lawrence Rotch, 177; the Writer of the Report, 177; Scientific Weather Prediction for Agricultural Purposes, Dr. van Bebber, 185; Aerolites, H. L. Ward, 190; W. M. Foote, 190; the Wind during Eclipses of the Sun, 200; A. L. Rotch, 589; Remarkable Marine Dust Haze, Dr. R. H. Scott, F.R.S., 214; Wire Fencing and Lightning, F. J. Brodie, 257; Solar Halos, 279; Compensation in Weather, Alex. B. MacDowall, 295; Indian Tidal Forecasts, 303; Report of Mauritius Observatory, 303; Low Barometric Pressure on December 29, 1899, 310; Severe Frost in December 1899, 311; Rainfall and Temperature of 1899, 353; Die Orkane des Fernen Ostens, Dr. Paul Bergholz, 317; the Lukchun (Central Asia) Depression, General Tillo, 328; Report of Meteorological Council, 328; Drunkenness and the Weather, Prof. Edwin Dexter, 365; Kite Observations of 1898, H. C. Frankenhof, 371; the Air Movement at Simla and in the Western Himalayas, 380; Death and Obituary Notice of Prof. H. A. Hazen, 398; Recent Floods in England, 398; Diurnal Rain-range, 1871-1890, Dr. R. H. Scott, 399; Mean Temperature of Sea-surface Round British Coasts, and its Relation to Air-temperature, 399; Present State of Polar Ice, 422; Phenological Observations for 1899, E. Mawley, 434; Percolation Experiments at Rothamsted, Dr. R. H. Scott, F.R.S., 435; Barometric Oscillations of February 13-19, 1899, Joseph Jaubert, 436; the Aims and Methods of Meteorological Work especially as Conducted by National and State Weather Services, Cleveland Abbe, 448; Hail-prevention by Gun-firing, Dr. J. M. Pernter, 451; Remarkable Hailstorm in Cape Colony, O. D. Deacon, 594; Climatological Record for British Empire for 1898, 457; Death and Obituary Notice of George James Symons, F.R.S., 475; Death and Obituary Notice of Dr. E. J. Lowe, F.R.S., 498; Fog on Great Lakes, U.S.A., 500; Quartz Thermometers, M. Dufour, 521, 531; Dynamics of Cyclones, John Aitken, F.R.S., 531; Practical Exercises in Elementary Meteorology, Robert De Courcy Ward, 560; Jubilee of the Royal Meteorological Society, 565; Recent International Balloon Ascents, Dr. H. Hergesell, 572; Recent Exploration in Upper Air and its Bearing on Theory of Cyclones, 611; Remarkable Secondary Tidal Undulations, W. B. Dawson, 619; the High April Temperatures, 620; a Curious Fact about London Summers, A. B. MacDowall, 627
- Meteorite off Greek Coast, Capt. G. Neville, 111
- Meteorite, Illinois Gulch, H. L. Preston, 529
- Meteorites, Two New American, H. L. Preston, 626
- Meteors: the Leonid Meteors, 41, 374; Dr. G. Johnstone Stoney, F.R.S., 28, 32; Dr. A. M. W. Downing, F.R.S., 28; W. F. Denning, 81; Dr. W. J. S. Lockyer, 132; Thos. W. Kingsmill, 491; Contemporary Meteor-showers of the Leonid and Bielid Meteor-periods, Prof. A. S. Herschell, F.R.S., 222, 271; Supposed Daylight Leonids, W. F. Denning, 152; a Daylight Meteor, H. H. P. Bouverie, 279; Rev. R. Hudson, 280; a Brilliant Meteor in Sunshine, 306; the Andromedes, 61; Meteors of Biela's Comet, E. C. Willis, 78; W. F. Denning, 78; a Brilliant Meteor, Samuel Barber, 326; Meteor Photography, 424; a Brilliant Fireball, Mr. Crommelin, 548
- Meunier (Louis), Rapid Method for Determining Carbonic Acid in Gaseous Mixtures, 435
- Mexico, Catalogue of a Collection of Objects Illustrating the Folklore of, Prof. Frederick Starr, 488
- Meyer (A. B.), the Birds of Celebes, 605
- Meyer (Prof. E. von), the Colloid Metals, 64
- Meyer (Dr. H.), Determinations of Radicle in Carbon Compounds, 538
- Meyer (Dr. Oskar Emil), the Kinetic Theory of Gases, 289

- Meyer (Richard), Experiments on Condensation of Aromatic Diamines with Dibasic Acids of Oxalic Series, 63  
 Michell (Stephen), Mine Drainage, Prof. W. Galloway, 606  
 Micrometer, Electrical, P. E. Shaw, 529  
 Micro-organism of Faulty Rum, the, V. H. Veley, F.R.S., and Lillian J. Veley, 468  
 Microscopy: the Total Depth of Microscopic Objectives, L. E. Ryther, 16; Journal of Royal Microscopical Society, 23, 262, 432, 602; Royal Microscopical Society, 46, 142, 358, 506, 578; Recent Improvements in Microscopy, 46, 142, 578; a New Rocking Microtome, 115; Death of W. T. Suffolk, 256; the Zeiss Photo-micrographic and Projection Apparatus, Dr. J. W. Measures, 506; a Freshwater Chert from Asia Minor, W. T. Haydon, 520; Microscopic Researches on Glycogen, Part II., Charles Creighton, 586  
 Microtome, Rocking, a New, 115  
 Middleton (R. E.), a Treatise on Surveying, 150  
 Middleton (R. M.), *Asplenium Bradleyi*, 458  
 Miers (Prof. H. A., F.R.S.), a Treatise on Crystallography, W. J. Lewis, 485  
 Migration, Internal in England and Wales, Prof. A. W. Flux, 383  
 Migula (Dr. W.), System der Bakterien, Dr. E. Klein, F.R.S., 464  
 Milk-preservation by Aeration, Dr. F. H. Bowman, 507  
 Mill (Dr. H. R.), Account of the Cruise of Sir George Newnes' Yacht, *Southern Cross*, from Hobart to Cape Adare, 18; Suggested System of Terminology for the Forms of Sub-oceanic Relief, 19; Geography of South-west Sussex, 353; the Geography of Europe, Geo. G. Chisholm, 368; Temperate Chile, a Progressive Spain, W. Anderson Smith, 536  
 Miller (Dr. G. A.), the Simply Transitive Primitive Groups, 404  
 Milne-Edwards (Prof. A.), Death of, 617  
 Mimicry, Mr. Distant, 235  
 Mimicry; the Feather-stars of the Bahamas, Prof. Verrill, 16  
 Minakata (Kumagusu), Indian Corn, 392, 515; Crab Ravages in China, 491; Illogicality concerning Ghosts, 564  
 Mind, Brain in Relation to, Dr. J. Sanderson Christison, 295  
 Mine Drainage, Stephen Michell, Prof. W. Galloway, 606  
 Mineralogy: Mercury in New South Wales, 15; Iodine in New South Wales Copper Ores, Arthur Dieseldorff, 483; Composition of New South Wales Labradorite and Topazes, G. Harker, 483; Mineralogy of New Brunswick, Dr. L. W. Bailey, 16; New Minerals from Franklin (New Jersey, U.S.A.) Zinc Mines, S. L. Penfield and C. H. Warren, 93; New Mode of Occurrence of Ruby in North Carolina, J. W. Judd and W. E. Hidden, 93; the Colour of Flints, W. H. Wheeler, 106; Florencite, Dr. E. Hussak and G. T. Prior, 119; Jordanite and Rathite, H. Jackson, 119; Mineralogical Society, 119, 382, 579; Stokesite, A. Hutchinson, 119, 215; the Elements of Blowpipe Analysis, Frederick Hutton Getman, 176; Aerolites, H. L. Ward, 190; W. M. Foote, 190; Floating Stones, Dr. Erlend Nordenskiöld, 278; Cecil Carus-Wilson, 318; R. C. T. Evans, 318; Prof. A. W. Brightmore, 346; Mineral Wealth of Zoutpansberg, D. S. S. Steuart, 281; the "Rotten Stone" Granite of East Finland, Boris Popoff, 285; Death and Obsequies of J. R. Gregory, 302; Graftonite, S. L. Penfield, 310; Origin of Granite, C. E. Stromeyer, 358; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589; Death of Prof. Thomas Eggleston, 370; Beudantite, E. G. J. Hartley, 382; the Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, Daniel C. Gilman, Prof. John W. Judd, C.B., F.R.S., 409; Mineral Production in India, 500; a Fresh-water Chert from Asia Minor, W. T. Haydon, 520; Illinois Gulch Meteorite, H. L. Preston, 529; Mineral Production of Canada in 1899, E. D. Ingall, 545; the Hamilitite Group, G. T. Prior, 579; Mineral Industries of the World, Prof. Le Neve Foster, 594; Notions de Mineralogie, A. F. Renard and F. Stöber, 619; Granodiorite, W. Lindgren, 626; Two New American Meteorites, H. L. Preston, 626  
 Minet (Ad.), Analyses Electrolytiques, 5  
 Mining: Alaska and the Klondike, Angelo Heilprin, 122; a Rudimentary Treatise on Coal and Coal-mining, Sir Warington W. Smyth, F.R.S., Bennett H. Brough, 411; Mining Engineers' Report Book and Directors' and Shareholders Guide to Mining Reports, Edwin R. Field, 489  
 Minguin (J.), Resolution of Racemic Benzylidene Camphor, 435  
 Minor Planet, New (1899 E Z), 187  
 Minor Planet (1899 E Y), New, 402; Herr Otto Knopf, 283  
 Minor Planet (434) Hungaria, Opposition of, 453  
 Mirguet (J.), Science Course for Secondary Schools, 562  
 Missionary Anthropology, A. B. Lloyd, 314  
 Mistletoe Distribution in Belgium, E. Laurent, 520  
 Mitchell (Prof.), Cooling of a Body in Steady Air-blast, 238  
 Mivart (Prof. St. George), Death of, 544; Obsequies of, 569  
 Mixer (W. G.), Products of Explosion of Acetylene, 310  
 Mohn (Prof. H.), a Wooden Ball of Unknown Origin, 31  
 Moir (J.), Amarine and Isoamarine, 119; Isoamarine, 405  
 Moissan (Henri), Action of Fluorine and Hydrofluoric Acid on Glass, 119; Composition of Hydrofluoric Acid by Volume, 459; New Fluoride of Manganese, 478; Magnesium Perfluoride, 483; Sulphur Perfluoride, 579; a Sulphur Fluoride Gas, 596; Density and Analysis of Sulphur Perfluoride, 603  
 Molecular Potential Function, the, Dr. G. Bakker, 156  
 Molecular Structure of Organised Bodies, F. W. Jones, 273  
 Molliard (Marin), Histological Modification produced by Phytotoxins in Stems, 120; Effect of Cold on Plant-nuclei, 531-2  
 Mollusca of Kolguev and Franz Josef Land, J. C. Melvill and R. Standen, 143  
 Montsarrat (K. W.), Morphology of Carcinomatous Blastomycetes, 285  
 Moon, Partial Eclipse of the, December 16, 195  
 Moore (T. S.), the Reversibility of Galvanic Cells, 458  
 Morality, the Scientific Basis of, Dr. G. Gore, 389  
 Morbidity: the Diseases of Children, G. Elder and J.S. Fowler, 5; Mosquitoes and Malaria, Dr. R. Hanitsch, 177; Major Ronald Ross, 522; a New Pathogenic Mucor, M.M. Lucet and Constantin, 192; Climatic Conditions of Plague, B. Latham, 214; the African Horse Sickness, Dr. R. Wallace, 235; Morphology of Carcinomatous Blastomycetes, K. W. Montsarrat, 285; Liverpool School of Tropical Diseases, 342; Bacterial Origin of Scurvy, Prof. A. M. Lévin, 400; Atmospheric Electricity and Disease, Dr. Schliep, Prof. John Perry, F.R.S., 471; the Emerods of the Bible Bubonic Plague, Drs. F. Tidswell and J. A. Dick, 501; New Pathogenic Microbe in Rabbit, C. Phisalix, 580; Oysters and Disease, Profs. W. A. Herdman, F.R.S., and R. Boyce, 587  
 Moreau (M.), Preparation of Carbazides, 239  
 Moreau (G.), Cause of the Hall Effect, 407  
 Morphology: Origin of Paired Limbs of Vertebrates, J. G. Kerr, 166; Symmetry and Asymmetry in Animals, Dr. L. Reh, 186; Experimental Morphology, Charles Benedict Davenport, 218; Morphology of Carcinomatous Blastomycetes, K. W. Montsarrat, 285; Pneumaticity of Olfactory Region of Mammalian Skull, Dr. S. Paulli, 354; Les Êtres Vivants, Paul Busquet, 609  
 Morris (E. F.), Criticisms on Modern Theory of Solutions, 435  
 Morton (G. H.), Death and Obsequies of, 571  
 Morton (W. B.), on the Carriers in the Kathode Rays, 365  
 Mosasaur's Skeleton, a complete, and a Skeleton of Diplodocus, H. F. Osborn, 534  
 Mosquitoes and Malaria, Dr. R. Hanitsch, 177; Major Ronald Ross, 522  
 Mossman (R. C.), the Price of Wheat at Haddington, 1627-1897, 519  
 Mosso (Prof. U.), Sugar as Heat Producer in Fasting Animals, 476  
 Motion, Newton's Laws of, Prof. P. G. Tait, 265  
 Motive Power, Steam Turbines, High Speed Navigation, Hon. C. A. Parsons, F.R.S., 424  
 Moulton (F. R.), Dynamical Criticism of Nebular Hypothesis, 597  
 Mountain Formation, Mechanical Theory of, Marcel Bertrand, 383  
 Mountains, a Book on, Die hochgebirge der Erde, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219  
 Moureaux (G.), Hall Phenomenon and Thermomagnetic Currents, 311  
 Muir (James), the Utility of Sulphate of Ammonia in Agriculture, 101  
 Muir (M. M. Pattison-), the Story of the Wanderings of Atoms, especially those of Carbon, 126  
 Müller (Dr. G.), Die Photometrie der Gestirne, 509; Photometric Observations of Mercury during Solar Eclipses, 574  
 Munich, the Conference of German Men of Science at, 62

- Muret-Sander's Encyclopædic English-German and German-English Dictionary, 610
- Murray (George, F.R.S.), Antarctic Exploration, 19; Cocco-spheres and Rhadospheres, 54; the Stockholm Conference on the Exploration of the Sea, 102
- Murray (Sir John), Atlantic Deep-sea Soundings, 286
- Museums, Ethnographical, 154
- Myers (C. S.), on Savage Music in Murray Island and Sarawak, 42
- Myograph, a New, Dr. Mahalanobis, 238
- Myres (John), a Catalogue of the Cyprus Museum, with a Chronicle of Excavations undertaken since the British Occupation, and Introductory Notes on Cypriote Archaeology, 195
- Mythology, Babylonian Religion and, L. W. King, Frank Rede Fowke, 437
- Naked Eye Object, Mercury as a, W. F. Denning, 431
- Nansen (Dr. F.), the Scientific Results of the Polar Expedition, 62
- Naphthalin, Crystallised, and its Refractive Properties, Prof. S. P. Thompson, 165
- Nasini (R.), New Lines in Infra-red Spectrum of Argon, 235
- Natural and Artificial Methods of Ventilation, 6
- Natural History: Death and Obituary Notice of Grant Allen, 13; Natural Objects in Old Spanish Sculpture, Dr. E. S. Fatigati, 15; Beasts: Thumbnailed Studies in Pets, Wardlaw Kennedy, 28; Peripatus in the Malay Peninsula, Dr. R. Horst, 31; Anales del Museo Nacional de Buenos Aires, 46, 372; the Cambridge Natural History, David Sharp, W. F. H. Blandford, 49; Birds Capturing Butterflies, F. Finn, 55; Oswald H. Latter, 56; Howard Fox, 152; Geo. A. Soper, 491; Types of British Animals, F. G. Aflalo, 77; Field and Folk Lore, Harry Lowerison, 102; Animals and Poisonous Plants, J. E. Harting, 142; Can Ants Hear? Mr. Weld, 157; Recent Changes in Fauna of Jamaica, Mr. Duerden, 157; the Essex Naturalist, the Journal of the Essex Field Club, 245; the Boyhood of a Naturalist, Fred. Smith, 246; Memoirs of Novorossian Society, 262; Memoirs of St. Petersburg University Society of Naturalists, 285; Death of M. Marion, 302; Obituary Notice of, 352; Beyond Petsora Eastward: Two Summer Voyages to Novaya Zemlya and the Islands of Barents Sea, H. J. Pearson, 348; an Egg-hatching Rabbit, 423; Colour-phases of Weasel, Mr. Barrett-Hamilton, 451; the Rostrum of Mesopodion, Dr. Henry O. Forbes, 490; the Natural History Museum—a Correction, G. S. Brady, 540; Death and Obituary Notice of Canon J. C. Atkinson, 544; a Book on Whales, F. E. Beddard, F.R.S., 585; Death of Prof. A. Milne-Edwards, 617
- Natural Philosophy, Elements of, Alfred Earl, 125
- Natural Selection, Physiology *versus*, an Unnatural Antithesis, 217
- Naturalist in Chile, a, W. Anderson Smith, Dr. Hugh Robert Mill, 536
- Nature, Colour in, a Study in Biology, Marion I. Newbigin, 217
- Nature Study in Rural Schools, 553
- Nautical Almanac, Day Numbers of, 208
- Naval Architecture: Armour Plates, R. A. Hadfield, 301
- Naval Observatory, United States, 330
- Naval Pioneers of Australia, the, Louis Becke, Walter Jeffery, 53
- Navigation: Under-currents, Rear-Admiral W. J. L. Wharton, K.C.B., F.R.S., 29; the Soulanges Canal, 40; the *Holland* Submarine Boat, 135; Blaikie's "Cosmosphere," 359; the Rolling of Ships, W. J. Luke, 371; Motive Power, Steam Turbines, High Speed Navigation, Hon. C. A. Parsons, F.R.S., 424
- Nebula, Ring, in Lyra, Central Star of, W. Stratonoff, 260
- Nebulæ, Spiral Predominance of, Prof. J. E. Keeler, 87
- Nebulæ: Variations in the Spectrum of Orion Nebula, Prof. Scheiner, 114
- Nehring (Dr.), the Pomeranian Aurochs Horn, 400
- Nenci (Prof. Tito), I. Bachi da Seta, 77
- Neptune, Occultation of, 62, 158, 453
- Nerves, the Development of Ganglion Cells and, N. Goronowitsch, 158
- Nettle Fibre for Yarns and Tissues, the Use of, 257
- Neuburger (M.), Petroleum in Algeria, 618
- Neville (F. H., F.R.S.), Gold Aluminium Alloys, 357
- Neville (Capt. G.), Meteorite off Greek Coast, 111
- New Brunswick, Mineralogy of, Dr. L. W. Bailey, 16
- New South Wales, Mercury in, 153
- New South Wales Royal Society, 47, 167, 483
- New York Zoological Park, the, 111, 303
- New Zealand: the Student's Flora of New Zealand and the Outlying Islands, Thomas Kirk, W. Botting Hemsley, F.R.S., 146; the New Zealand Zoological Region, H. Farquhar, 246; Is New Zealand a Zoological Region? Dr. Alfred R. Wallace, F.R.S., 273; Prof. Alfred Newton, F.R.S., 295; Charles Hedley, 589; the Coccidæ of New Zealand, Prof. T. D. A. Cockerell, 367; a New Peripatus from, Prof. Arthur Dendy, 444; Fertilisation of Flowers in New Zealand, Geo. M. Thomson, 564; the Takahe (*Notornis hochstetteri*), Prof. W. B. Benham, 576; List of the Genera and Species of New Zealand Plants, A. Hamilton, W. Botting Hemsley, F.R.S., 146
- Newbigin (Marion I.), Colour in Nature: a Study in Biology, 217
- Newstead (Robert), General Index, by Curator of the Grosvenor Museum, Chester, to Annual Reports of Observations of Injurious Insects, 1877-1898, Eleanor A. Ormerod, 126
- Newth (G. S.), Liquefaction of a Gas by "Self-Cooling," 627
- Newton (Prof. Alfred, F.R.S.), Is New Zealand a Zoological Region? 295
- Newton's Laws of Motion, Prof. P. G. Tait, 265
- Niagara Electrical Power Station, the, 85
- Nicaragua, the Level of Lake, Prof. A. Heilprin, 451
- Nicati (W.), Mechanism of Blood Pressure in Ocular Capillaries, 192
- Nicati (Dr. W.), La Philosophie Naturelle, 199
- Niclausse Water-tube Boiler, Mark Robinson on the, 21
- Nieloux (Maurice), Alcohol in Blood of Mother and Fœtus, 556
- Nicol Prisms, Large, C. D. Ahrens, 31
- Nile Delta, on Desert Sand-dunes Bordering the, Vaughan Cornish, 20, 403
- Nile Valley, Flint Implements from, 597
- Nordenskiöld (Baron A. E.), Minerals containing Rare Earths, 603
- Nordenskiöld (Dr. Erland), Floating Stones, 278
- Normal Variants, a Geometric Determination of the Median Value of a System of, from Two of its Centiles, Dr. Francis Galton, F.R.S., 102
- Norris (Mr.), the Homogeneity of Tellurium, 402
- North American Geology, 600
- North American Slime Moulds, the, Prof. T. H. MacBride, 173
- Northumberland Sea Fisheries, Report of Committee for 1899, 354
- Northwich, Pontoon-based Swing Bridges at, 135, 327
- Norway, Salmon Hatching in, 39
- Nova Scotia, Inaugural Address delivered at the Opening of the Fortieth Session of Dalhousie College, Halifax, Prof. J. G. Macgregor, 159
- November Meteors: the Coming Meteor Shower, 41
- November Meteors, the, Dr. W. J. S. Lockyer, 132
- Novorossian Society, Memoirs of, 262
- Nuttall (Dr. G. H. F.), Insects as Carriers of Disease, 153
- Observatories: Position of Perth Observatory, W. E. Cooke, 114; United States Naval Observatory, 330; Harvard College Observatory, 402; the New Odessa Observatory, 454; Companion to the Observatory, 187
- Oceanography: Dr. Gerhard Scholt on the Chief Results of the Voyage of the *Valdivia*, 19; Observations of Temperature of Water and Air round the British Islands, H. R. Dickson, 19; Temperature and Salinity of the Surface Water of the North Atlantic during 1896 and 1897, H. N. Dickson, 19; Suggested System of Terminology for the Forms of Sub-oceanic Relief, Dr. H. R. Mill, 19; Under-currents, Rear-Admiral W. J. L. Wharton, K.C.B., F.R.S., 29; Results of Recent Soundings in the Pacific, Prof. Alexander Agassiz, 211
- Occultation, the Computation of, 355
- Occultation of Neptune, 62, 158, 453
- Odessa Observatory, the New, 454
- Ogawa (Masataka), Ammonium Amidodulphites, 434; Products obtained by Heating Ammonium Sulphite, Thiosulphate and Trithionate, 434
- Ohnefalsch-Richter (Max), a Catalogue of the Cyprus Museum,

- with a Chronicle of Excavations undertaken since the British Occupation, and Introductory Notes on Cypriote Archaeology, 195
- Obers (Wilhelm), sein Leben und seine Werke, Dr. J. L. E. Dreyer, 486
- Oldham (R. D.), the Propagation of Earthquake Motion to Great Distances, 595
- Omori (Prof.), Seismology in Japan, 282; the Great Japanese Earthquake of 1891, 619; Earthquake Measurement in Brick Buildings, 619
- Ophir, the Situation of, Dr. Carl Peters, 203
- Opposition of Minor Planet (434) Hungaria, 453
- Ophthalmology, Handbook of Optics for Students of, Prof. William Norwood Suter, 149
- Optics: Interference Curves depending on Perspective, A. Mallock, 29; Sextant Telescopes, W. E. Plummer, 54; Kinematical Theory of Light-propagation, M. Sagnac, 136; Handbook of Optics for Students of Ophthalmology, Prof. William Norwood Suter, 149; Optics: a Manual for Students, A. S. Percival, 149; Obliquely crossed Cylindrical Lenses, Prof. S. P. Thompson, 164; Exact Formula for Lenses, T. H. Blakesley, 165; Crystalline Naphthalene and its Refractive Properties, Prof. S. P. Thompson, 165; Die Optischen Instrumente der Firma R. Fuess deren Beschreibung, Justierung, und Anwendung, C. Leiss, 241; Strains in Rupert's Drops, K. Mack, 262; Optical Activity and Chemical Composition, Dr. H. Landolt, 269; Optical Method of determining Density of Sea-water, J. J. Manley, 286; Nature of White Light, E. Carvallo, 287; Modern Lighthouse Apparatus, Dr. J. A. Purves, 393; Diffuse Reflection of Light, H. Wright, 432; Monochromatic Vision, Sir W. de W. Abney, 433; Rock-salt as a Refraction Standard, Prof. S. P. Langley, 545-6; the Wastefulness of Artificial Lights, C. G. Abbot, 546; Reflective Power of Metals, E. Hagen and H. Rubens, 555; Absorption of Light in Electrically Glowing Gases, M. Cantor, 626; Effect of Ultra-violet Light upon Gaseous Bodies, P. Lenard, 627
- Orbit, Definitive, of Comet 1897, III., Herr E. Wessel, 374
- Orbit of Eros, 236
- Orbit of Fifth Satellite of Jupiter, Prof. E. E. Barnard, 157
- Orbits of Spectroscopic Doubles, Computation of, Dr. K. Schwarzschild, 521
- Ordnance Survey, Progress of the Work of the, during the last Twelve Years, Col. Sir John Farquharson, 20
- Organic Evolution, a First Book in, Dr. D. Kerfoot Shute, 488
- Organised Bodies, Molecular Structure of, F. W. Jones, 273
- Organisms, the Growth of Animal and Vegetable, Charles Benedict Davenport, 218
- Orgler (A.), Spark potential in Gases, 432
- Oriental History from B.C. 850 to A.C. 330, 361
- Origin of Granite, C. E. Stromeyer, 358; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589
- Orion Nebula, Variations in the Spectra of, Prof. Scheiner, 114
- Ormerod (Eleanor A.), General Index, by Robert Newstead, F.E.S., Curator of the Grosvenor Museum, Chester, to Annual Reports of Observations of Injurious Insects, 1877-1898, 126
- Ornithology: a Hand-list of the Genera and Species of Birds, R. Bowdler Sharp, 126; Birds Capturing Butterflies, F. Finn, 55; Oswald H. Latter, 56; Howard Fox, 152; George A. Soper, 491; Death and Obituary Notice of A. C. Stark, 155; Sailing Birds dependent on Wave-power, L. Hargrave, 167; Obituary Notice of Dr. Elliott Coues, 278; Our Rarer British Breeding Birds, their Nests, Eggs, and Summer Haunts, R. Kearton, 323; the Birds of Rhode Island, R. H. Howe, jun., and E. Sturtevant, 323; the Birds of Eastern North America, Water Birds, C. B. Cory, 323; the Fauna of South Africa: Birds, A. C. Stark, 516; the Birds of Africa, comprising all the Species which occur in the Ethiopian Region, G. F. Shelley, 516; Extirpation of a Species of Humming-bird by Hurricane, T. D. Pigott, 545; the Takahe (*Notornis hochstetteri*), Prof. W. B. Benham, 576; the Birds of Celebes, A. B. Meyer and L. W. Wiglesworth, 605; Albinism and Melanism in Australasian Birds, R. Hall, 620
- Orton (Dr. Edward), Death of, 38; Obituary Notice of, 59
- Osborn (G.), Elementary Algebra, 200
- Osborn (Prof. H. F.), the Mounting of Bones of Extinct Mammals, 499; a Complete Mosasaur's Skeleton and a Skeleton of Diplodocus, 534
- Oscillations Electriques, Recherches Expérimentales sur les, A. Turpain, 268
- Osteology, the Mounting of Bones of Extinct Mammals, Prof. H. F. Osborn, 499
- Ostwald (Prof.), Periodic Changes in Rate of Reaction, 65
- Ostwald's Dilution Law, New Formula for, Dr. W. D. Bancroft, 303
- Outlines of Bacteriology, Dr. L. H. Thoinot and E. J. Masselin, 221
- Ouvard (L.), the Metallic Borates, 336; Borates of Magnesium Series, 384
- Oysters and Disease, Profs. W. A. Herdman, F.R.S., and R. Boyce, 587
- Ozone-formation, Discharge of Electrified Bodies and, M. P. Villard, 311
- Pacher (Dr. G.), Variations in Coefficient of Viscosity of Water near 4° C., 61; Viscosity of Dielectric Liquids not affected by Uniform Electrostatic Field, 572
- Pacific Corals, the, ii., A. Agassiz, 432
- Pacific, Results of Recent Soundings in the, Prof. Alexander Agassiz, 211
- Page (Frederick J. M.), a Manual of Chemistry, Inorganic and Organic, 442
- Pagel (C.), New Method for Preparation of Double Sulphates of Chromium, 604
- Paget (Sir James, Bart., F.R.S.), Death of, 234; Obituary Notice of, Dr. F. W. Tunnicliffe, 256
- Paget (Stephen), Experiments on Animals, 512
- Paintings, Grey's Rock, H. Ling Roth, 248
- Palaeobotany: *Blechnoxylon*, R. Etheridge, jun., 303; Jurassic Plants in Manchester Museum, A. C. Seward, 358; Wealden Plants from Bernissart, A. C. Seward, 359; *Equisetum Jolyi*, Ed. Bureau, 384; Origin of Fossil Trunks in Coal-measures, M. Grand'Eury, 579; the Stigmara, M. Grand'Eury, 628
- Palaeoecology in British Carboniferous Rocks, Dr. W. Hind, 191
- Palaeontology: Horn of Aurochs found in Pomerania, 135; the Pomeranian Aurochs Horn, Dr. Nehring, 400; Geschichte der Geologie und Paläontologie bis Ende des 19. Jahrhunderts, 145; New Miocene Rodent, *Anomalomys Gaudryi*, Cl. Goillard, 336; *Archioleum*, Señor Ameghino, 372; New Crinoidae: Oldhamia, Prof. W. J. Sollas, F.R.S., 382; the Mounting of Bones of Extinct Mammals, Prof. H. F. Osborn, 499; a Plesiosaur from Uitenhage, Cape Colony, Mr. Schwarz, 544; Death and Obituary Notice of Dr. Wilhelm Waagen, 545; Fossil Bird from Stonesfield Slate, Prof. H. G. Seeley, F.R.S., 578; the Lower Ludlow Formation and its Graptolite Fauna, E. R. M. Wood, 578; *Onchippidium*, Dr. Einar Lönnberg, 579; Palaeontology of Invertebrata, Prof. K. A. von Zittel, 608; Zones in the Chalk, Dr. A. W. Rowe, 625; the Archelon Turtles from Fort Pierre Cretaceous of South Dakota, G. R. Wieland, 626; *Urtacrinus* from Kansas, C. E. Hecher, 626
- Palaeozoic Ichthyology: Some Recently-discovered Silurian Fish Remains. A Link in the Chain of Organic Evolution, R. H. Traquair, F.R.S., 306
- Pamplin (William), Death and Obituary Notice of, 59
- Papilio Machaon, Ueber einige Aberrationen von, Dr. J. W. Spengel, 316
- Parallax, the Solar, M. Bouquet de la Grye, 236
- Paris: M. Alby on the Construction and Erection of the Alexander III. Bridge over the Seine in Paris, 21; Paris Academy of Sciences, 24, 47, 71, 95, 119, 143, 166, 192, 239, 287, 311, 335, 359, 383, 407, 435, 459, 483, 507, 531, 555, 579, 603, 627; Prize List of the, 211; Prizes proposed by the, for 1900, 237; the Great Paris Telescope, Sir Norman Lockyer, K.C.B., F.R.S., 178
- Parker (Prof. J. T.), a Manual of Zoology, 559; an Elementary Course of Practical Zoology, 559
- Parker (Prof. W. N.), an Elementary Course of Practical Zoology, 559
- Parkin (J.), on some Isolated Observations bearing on the Function of Latex, 67
- Parkinson (John), Rocks of South-east Coast of Jersey, 530
- Parkinson (R.), Ethnography of Solomon Islands, 546
- Parkinson (Wm.), Shadows of Insects, 177
- Farrish (S.), Chemistry for Organised Schools of Science, 5
- Parsons (Hon. C. A., F.R.S.), on Details of the Fast Cross

- Channel and Atlantic Liners, 21; Motive Power, Steam Turbines, High Speed Navigation, 424
- Parsons (Frances Theodora), How to know the Ferns, 412
- Passing of the Empires, the, G. Maspero, 361
- Pathology, Death of Dr. Birch-Hirschfeld, 134
- Paul (K. M.), Death of, 397
- Paulli (Dr. S.), Pneumaticity of Olfactory Regions of Mammalian Skull, 354
- Paulsen (M.), Photographs of Aurora Spectrum, 621
- Paving-stones, Artificial, in Germany, 14
- Peach (B. N., F.R.S.), the Silurian Rocks of Britain. Vol. i. Scotland, 25
- Peachey (S. J.), Asymmetric Optically Active Nitrogen Compounds, 94, 96; Attempts to Resolve into Active Constituents Compounds containing Asymmetric Sulphur Atoms, 373; Methylenehydrotine Dextrocamphorsulphonate and Dextro- $\alpha$ -bromo-camphorsulphonate, 405; Dextromethyl-ethyl- $n$  propyl Tin Iodide, 434
- Peake (R. E.), Atlantic Deep-sea Soundings, 286
- Pearson (H. J.), Beyond Petsora Eastward: Two Summer Voyages to Novaya Zemlya and the Islands of Barents Sea, 348
- Pearson (Karl), Mathematical Contributions to Theory of Evolution, 505
- Peddle (Dr. W.), Thermo-electric Properties of Mercury, 286; the Torsional Constants of Iron and Steel, 359; Law of Elastic Fatigue, 482
- Peirce (Prof. B. O.), Specific Heat of Marble, 367
- Pélabon (H.), Chemical Equilibrium of a Four-gas System, 459; Action of Hydrogen on Antimony Sulphide, 580
- Pellat (H.), Stratifications, 383
- Pellat (S. L.), New Minerals from Franklin (New Jersey, U.S.A.) Zinc Mines, 93; Graftonite, 310
- Pentavalent Nitrogen, Stereo-chemistry of, Edgar Wedekind, 199
- Peopling of Australia, the, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193
- Pepper (Prof.), Death and Obituary Notice of, 545
- Percival (A. S.), Optics, a Manual for Students, 149
- Perfumes, Chemistry of, Dr. W. H. Warren, 619
- Periodic Changes of Solar Activity, the Relation between the, and the Earth's Motion, Dr. J. Halm, 445
- Peripatus in the Malay Peninsula, Dr. R. Horst, 31
- Peripatus from New Zealand, a New, Prof. Arthur Dendy, 444
- Perkin (Dr. F. Mollwo), Advancement of Electrical Chemistry, 428
- Perkin (W. H., sen.), Rotatory Powers of Aromatic Hydrocarbons, 264
- Perkin (W. H., jun.), Brasilin and Hæmatoxylin, III., 264; Action of Alcoholic Potash on Monobromoglutonic Ester, 264; Ethyl Pentanehexacarboxylate, 405
- Perman (E. P.), Vapour-density of Bromine at High Temperatures, 285
- Pernter (Dr. J. M.), Hail-prevention by Gun-firing, 451
- Pérest (A.), Mass of Cubic Decimetre of Water, 71; New Source of Light for Spectrometry of Precision, 407; Constitution of Yellow Sodium Rays, 483
- Perreau (M.), Influence of Röntgen Rays on Electrical Resistance of Selenium, 167
- Perrine (Prof. C. D.), Refraction Effect of Comet Swift, 87
- Perrotin (M.), the Giacobini Comet, 47
- Perry (Prof. John, F.R.S.), the Steam Engine and Gas and Oil Engines, 100; Burst of Sir George Stokes, 102; Valve Motions of Engines, 152; to Calculate a Simple Table of Logarithms, 415; Atmospheric Electricity and Disease, 471; Electricity in War, 541; Practical Mathematics, Prof. A. G. Greenhill, F.R.S., 582
- Perspective Interference Curves depending on Perspective, A. Mallock, 29
- Perth Observatory, Position of, W. E. Cooke, 114
- Perturbations of Venus, Secular, Prof. Eric Doolittle, 41
- Pertz (D. F. M.), Experiments on Periodic Movement of Plants, 359
- Pestana (Dr. Camara), Death of, 84
- Peters (Dr. Carl), the Situation of Ophir, 203
- Peters (H.), Iodonium Compounds, 506
- Petroleum in Algeria, M. Neuburger, 618
- Petroleum, Animal Origin of, 63
- Petrology: Origin of Granite, C. E. Stromeyer, 358; Lord Kelvin on the Origin of Granite, A. R. Hunt, 391, 589
- Petrovsky (A. A.), Measurement of Capacity in Heterogeneous Medium, 335
- Petsora Eastward, Beyond, Two Summer Voyages to Novaya Zemlya and the Islands of Barents Sea, H. J. Pearson, 348
- Pettersson (Prof. Otto), Stockholm International Conference on the Exploration of the Sea, 413
- Pflanzen, Das Geschlecht der, R. J. Camerarius, 293
- Pflaum (H.), a Vacuum Electrode, 554
- Pharmacy: an Introduction to the Study of Materia Medica, Henry G. Greenish, 174; Obituary Notice of Dr. Henri Beauregard, 593; Death and Obituary Notice of Gustave Planchon, 618
- Phillips (C. E. S.), Surface Tension Experiment, 481
- Philosophie Naturelle, La, Dr. W. Nicati, 199
- Philosophy of Atomic Theories, the, 26
- Phisalix (C.), New Pathogenic Microbe in Rabbit, 580
- Phonographic Record, the Acoustic Analysis of the Vowels from the, Prof. Louis Bevier, 467
- Phosphorescence, Loss by Heat of, Gustave le Bon, 579
- Photography: Dark Lightning Flashes, Dr. W. Ainslie Hollis, 7; Dr. W. J. S. Lockyer, 7; on the Cause of Dark Lightning and the Clayden Effect, Prof. R. W. Wood, 104; a Photograph of Clouds, Lieut.-General Tennant, 14; Szczepanik's Process of Preparing Textile Designs, Prof. R. Beaumont, 14; Long Focus Photographic Telescope, 41; a Fault in Lippmann's Photography, P. Wiener, 93; British Journal Photographic Almanac for 1900, 175; Photography of Current Curves, J. Zenneck, 262; Apparatus for Instantaneous Photography producing Maximum Effect, G. Sigriste, 287; a New Photographic Photometer, Dr. J. Hartmann, 306; Transformation of Negative Image into Lamellar State, and Colour Phenomena therefrom, A. Frillat, 335; the Effects of Lightning upon Electric Lamps, Sydney Webb, 343; Sir G. G. Stokes, Bart., F.R.S., 343, 413; Prof. R. W. Wood, 391; Reduction of Star Photographs, A. R. Hinks, 355; Die Photographie der Gestirne, Dr. J. Scheiner, 363; Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the Pursuit of Celestial Photography, Dr. Isaac Roberts, F.R.S., Dr. William J. S. Lockyer, 533; Recent Progress in Photography, 416; Meteor Photography, 424; Photographs of Sound-waves, Prof. R. W. Wood, 433; Photography of Live Fish, Douglas English, 451; the Zeiss Photo-micrographic and Projection Apparatus, Dr. J. W. Measures, 506; Theorie und Geschichte des Photographischen Objectives, Moritz von Rohr, 511
- Photometry: Proposed New Harvard Photometry, 208; a New Photographic Photometer, Dr. J. Hartmann, 306; Die Photometrie der Gestirne, Dr. G. Müller, 509; New System of Spectrum Photometry, Prof. D. B. Brace, 521
- Photometric Observations of Mercury during Solar Eclipses, Dr. G. Müller, 574
- Physical Atlas, the, J. G. Bartholomew and A. J. Herbertson, 171
- Physical Geography of Jamaica, the Geology and, Robert T. Hill, 237
- Physical Geography, Prof. W. M. Davis, assisted by W. H. Snyder, 266
- Physics: Geschichte der Physikalischen Experimentierkunst, Dr. E. Gerland and Dr. F. Traummüller, 4; Physical Society, 23, 70, 118, 164, 334, 382, 457, 481, 529; Equilibrium of Vessel Carrying Liquids, M. Appell, 24; Elements of Physics, Henry Crew, Prof. Arthur Schuster, F.R.S., 27; Interference Curves Depending on Perspective, A. Mallock, 29; Large Nicol Prisms, C. D. Ahrens, 31; Water Boiled by Cold, R. W. Quick, 60; Variations in Viscosity Coefficient of Water near 4° C., Dr. G. Pacher, 61; the Distillation of Metals, C. Kahlbaum, 65; Periodic Changes in Rate of Reaction, Prof. Ostwald, 65; the Silver Thread Phenomenon in Giggleswick Well, Dr. Broadbent, 70; Decrease in Tension of Solution Vapours at 0°, Dr. A. Smits, 72; Note on Distances to which Explosions are Felt and Heard, Dr. Charles Davison, 91; Explosions in Air, W. Wolff, 93; Wiedemann's Annalen, now Annalen der Physik, 93, 190, 262, 432, 554, 626; the Rise and Development of the Liquefaction of Gases, Willett L. Hardin, 98; la Liquefaction des Gaz et ses Applications, Prof. Julien Lefèvre, 98; Liquefaction of a Gas by Self-cooling, G. S. Newth, 627; the Resistance of the Air, 248; Prof. G. H. Bryan, F.R.S., 107, 248; Researches on Kerr's Phenomenon, MM. Abraham and Lemoine, 112; the Elastic Properties of Rocks, P.

Rudski, 113; Apparatus for Determining Heat required to Evaporate Steam from Saturated Salt Solutions, Mr. Trouton, 143; the Molecular Potential Function, Dr. G. Bakker, 156; Attempt to Reconcile Apparently Opposite Mechanical Properties of the Ether, Lord Kelvin, 166; Method for Determining Mean Density of Earth, Al. Gerschun, 192; Kleiner Leitfaden der Practischen Physik, Dr. F. Kohlrausch, 200; Handbook of Physics and Chemistry, H. E. Corbin and A. M. Stewart, 221; Lehrbuch der Experimental Physik, Adolph Wüllner, 221; Cooling of a Body in Steady Air-blast, II., Prof. Mitchell, 238; Discontinuities Produced by Brusque Expansion of Compressed Gases, Paul Vieille, 239; Changes in Volume Accompanying Hardening of Hydraulic Cements, H. Le Chatelier, 239; Le Phénomène de Zeeman, A. Cotton, 270; Vapour Density of Bromine at High Temperatures, E. P. Perman and G. A. S. Atkinson, 285; Geometrical Representation of Relation between Wave-velocity and Group-velocity, Prof. Horace Lamb, F.R.S., 286; Value of Internal Pressure in Equations of Van Waals and Clausius, Daniel Berthelot, 287; the Kinetic Theory of Gases, Dr. Oskar Emil Meyer, 289; Prof. G. H. Bryan, 289; a Treatise on the Kinetic Theory of Gases, S. H. Burbury, 289; Prof. G. H. Bryan, 289; Leçons de Chimie Physique, J. H. van 't Hoff, 294; New Formula for Ostwald's Dilution Law, Dr. W. D. Bancroft, 303; the Co-volume in Characteristic Equation of Fluid, Daniel Berthelot, 311; Physico-chemical Studies of Tin, MM. Cohen and Van Eyk, 330; Contact Electricity, 332; Frequency of Transverse Vibrations of Stretched Indiarubber Cord, T. J. Baker, 334; Change with Temperature of Coefficient of Absorption of Gas in Liquid, Prof. Kuenen, 359; Specific Heat of Metals, Robert W. Willson, 367; Hydrometers, G. Guglielmo, 371, 421; Conditions of Solitary Wave-propagation, R. W. Gwyther, 383; Motion of Particles in Steady Fluid Motion, R. W. Gwyther, 383; Surface Tension of some Organic Liquids, Paul Dutoit and Louis Friderich, 383; Physical Principles and Moral Precepts, Dr. G. Gore, 389; Exercises in Practical Physics, R. A. Gregory and A. T. Simmons, 390; Death of Dr. Hermann Schäfer, 397; Freezing Points of Solutions, E. H. Loomis, 399; Entropy of Radiation, J. Van der Waals, jun., 407; to Calculate a Simple Table of Logarithms, Dr. Arthur Dufton, 415; Prof. John Perry, F.R.S., 415; Mechanical Methods of Calculating Logarithms, H. C. Pocklington, 469; Soap-bubbles, O. Dörge, 432; Molecular Susceptibility of Para-magnetic Salts of Iron Group, and of Salts of Rare Earths, O. Liebknecht, 432; Molecular Susceptibility of Para-magnetic Salts of Iron Group, A. P. Wills, 432; Molecular Susceptibility of Salts of Rare Earths, H. du Bois, 432; Criticism on Modern Theory of Solutions, E. F. Morris, 435; Suggested Source of the Energy of the Becquerel Rays, Dr. Fred. T. Trouton, F.R.S., 443; the Osmotic Pressure Analogy, Prof. Leffeldt, 453; Relative Effusion-rates of Argon, Helium and other Gases, Dr. F. G. Donnan, 457; the Distillation of Liquid Air, E. C. C. Baly, 457; Uses of Liquid Air for Researches at Low Temperatures, Prof. Ramsay, 458; Ouvres Scientifiques de L. Lorenz, H. Valentiner, 465; Death and Obituary Notice of Dr. Thomas Preston, F.R.S., 474; Effects of Strain on Thermo-electric Qualities of Metals, Prof. M. Maclean, 481; Surface-tension Experiment, C. E. S. Phillips, 481; State of Practical Instruction in Physics, Dr. Boris Weinberg, 515; Physical Review, 529; Relations between Electrolytic Conductivity and Internal Friction of Saline Solutions, P. Massoulier, 531; a Text-book of Physics, W. Watson, Prof. Hugh L. Callendar, F.R.S., 557; Heat for Advanced Students, Edwin Edser, Prof. Hugh L. Callendar, F.R.S., 557; Text-book of Experimental Physics, Eugene Lommel, Prof. Hugh L. Callendar, F.R.S., 557; Lectures on some of the Physical Properties of Soil, R. W. Warrington, F.R.S., 561; Science Course for Secondary Schools, G. Robb and J. Mirguet, 562; Viscosity of Dielectric Liquids unaffected by Uniform Electrostatic Field, Dr. G. Pacher and L. Finazzi, 572; Determination of Mass of Cubic Decimetre of Water, Dr. C. E. Guillaume, 572; Mechanism of Gelation and Stability of Hydrosols, W. B. Hardy, 599; Movements produced in Liquids by Heat Convection, Henri Bénard, 604; Size at which Heat Movements Manifested in Matter, Prof. G. F. Fitzgerald, F.R.S., 612; Death of Prof. Silas W. Holman, 618

Physiognomy: Human Nature: its Principles and the Principles of, 127  
 Physiography: Experimental Science (Physiography, Section i.), R. A. Gregory and A. T. Simmons, 77; Die hochgebirge der Erde, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219; First Steps in Earth-knowledge, being an Introduction to Physiography, J. A. Harrison, 317; Elementary Practical Physiography, J. Thornton, 539  
 Physiology: Affinities of Vascular Endothelium, Henri Stassano, 24; Exercise and Respiration, Dr. A. Foxwell, 39; Estimation of Alcohol in Blood and Tissues, N. Gréhan, 95; Alcohol in Blood of Mother and Foetus, Maurice Nicloux, 556; Stereo-chemistry and Physiology, Prof. Emil Fischer, 140; Normal Arsenic in Animals, Armand Gautier, 166-7; Arsenic in Animals, Armand Gautier, 383; Recent Researches on Uric Acid, Prof. Emil Fischer, 187; Co-existence of Reducing and Oxidising Diastase in Animal Organs, J. Abelous and E. Gérard, 192; a New Pathogenic Mucor, MM. Lucet and Constantin, 192; Mechanism of Blood-pressure in Ocular Capillaries, W. Nicate, 192; Fat and Soap Absorption in Large and Small Intestine, Dr. Hamburger, 216; Physiology *versus* Natural Selection: an Unnatural Antithesis, 217; the Zymolysis of Tissues, Dr. J. S. McKendrick, 238; a New Myograph, Dr. Mahalanobis, 238; Effect of Electric Discharges on Heart of Mammals, J. L. Prevost and F. Battelli, 239; New Theory of Smell, MM. Vaschide and Van Melle, 240; Law of Conservation of Energy in Human Organism, Prof. W. O. Atwater and E. B. Rosa, 258; Plastic Activity of Animal Cells, L. Ranvier, 287; Ovarian Follicle of Reptiles, Marie Loez, 287; Automatism of Nerve Cells, M. Pompilian, 312; a Crystallised Fibrin, L. Maillard, 336; Nature of Propagation of Nervous Impulse, G. Weiss, 336; New Method of Measuring Thermal Sensibility, Ed. Toulouse and W. Vaschide, 336; Transformation of Nitro-benzene into Aniline by Horse-kidney Ferment, E. Abelous and E. Gérard, 407; Les Sucres et leurs principaux Dérivés, Prof. L. Maquenne, Prof. R. Meldola, F.R.S., 461; Sugar as Heat-producer in Fasting Animals, Prof. U. Mosso, 476; Work of Spinal Nervous Centres, J. Joteyko, 483; concerning Physiological Alternation of Kidneys, E. Bardier and H. Frenkel, 483; Diminished Digestive Activity of Saliva in Certain Diseases, Dr. W. G. A. Robertson, 531; Specific Heat of Blood, H. Bordier, 532; Measurement of Taste, Ed. Toulouse and N. Vaschide, 532; Transformation of Fat into Glycogen in Organism, Ch. Bouchard and A. Desgrez, 555; Microscopic Researches in Glycogen, Part II., Charles Creighton, 586; Absorption of Iodides by Human Skin, F. Gallard, 556; Vegetable Physiology. See Botany  
 Pick (Thos. Pickering), Surgery: a Treatise for Students and Practitioners, 76  
 Pickering (Prof. E. C.), Cerasi's Second Algol Variable, 454  
 Pickering (Prof. W. H.), Search for an Intramercurial Planet, 479  
 Pierce (G. W.), Application of Ratio-micrometer to Measurement of Short Electric Waves, 626  
 Pigeon, "Homing": the Orientation of the, E. de Cyon, 596  
 Pigmy Flints in Yorkshire, R. A. Gatty, 282  
 Pigott (T. D.), Extirpation of a Species of Humming-bird by Hurricane, 545  
 Pirsson (L. V.), Geology of Judith Mountains of Montana, 600  
 Pisciculture: Salmon Hatching in Norway, 39; European Rivers stocked with American Fry, 39  
 Pittman (E. F.), Underground Temperature, 484  
 Plague: Climatic Conditions of Plague, B. Latham, 214; the Indian Plague and Haffkine's Inoculations, 422; Anti-plague Inoculations, 550; the "Emerods" of the Bible Bubonic Plague, Drs. F. Tidswell and J. A. Dick, 501  
 Planarians, the, W. G. Vanhame, 15  
 Planchon (Gustave), Death and Obituary Notice of, 618  
 Planetary Atmospheres, Escape of Gases from, S. R. Cooke, 501; Dr. G. Johnstone Stoney, F.R.S., 515  
 Planetary Work at the Manora Observatory, 574  
 Planets: Secular Perturbations of Venus, Prof. Eric Doolittle, 41; Occultation of Neptune, 62, 158, 453; New Minor Planet (1899 E.Z.), 187; New Minor Planet (1899 E.V.), 402; Herr Otto Knopf, 283; Opposition of Minor Planet (434), Hungaria, 453; Search for an Intramercurial Planet, Prof. W. H. Pickering, 479; Planets at their Greatest Brilliance, C. T. Whitwell, 540

- Plant Relations : a First Book of Botany, John Coulter, 442  
 Plantes Médicinales : Atlas des Photomicrographie des, Drs. Braemer et Suis, 539  
 Plants, List of the Genera and Species of New Zealand, A. Hamilton, W. Botting Hemsley, F.R.S., 146  
 Plates, Armour, R. A. Hadfield, 301  
 Playfair (Lyon), Memoirs and Correspondence of, First Lord Playfair of St. Andrews, LL.D., F.R.S., Sir Wemyss Reid, 121  
 Plowright (Dr. Charles B.), On the Blue Colour in Woad, 331, 563  
 Plummer (W. E.), Sextant-telescopes, 54  
 Pocklington (H. C.), Mechanical Methods of Calculating Logarithms, 469  
 Pollen, the Potency and Prepotency of, Prof. H. Marshall Ward, F.R.S., 470  
 Polytechnic, the South-western, A. T. Simmons, 208  
 Pompilian (M.), Automatism of Nerve Cells, 312  
 Pomum in Pomo, Miss Tine Tammes, 408  
 Pope (T. H.), Manno-galactan and Lævulo-mannan, 530  
 Pope (W. J.), Asymmetric Optically Active Nitrogen Compounds, 94-96; Methylthylthetine Dextrocamphorsulphonate and Dextro- $\alpha$ -bromocamphorsulphonate, 405; Dextromethyl-ethyl- $\alpha$ -propyl Tin Iodide, 434; Attempts to resolve into Active Constituents Compounds containing Asymmetric Sulphur Atoms, 373; Racemisation during Formation of Benzylidene, Benzoyl and Acetyl Derivatives of Dextro-acet-tetrahydro- $\beta$ -Naphthylamine, 530  
 Popoff (Boris) the "Rotten Stone" Granite of East Finland, 285  
 Popular Astronomy for December, 208  
 Potato-Beetle, *Collops* Beetle feeding on Larva of Colorado, C. E. Mead, 328  
 Potency and Prepotency of Pollen, the, Prof. H. Marshall Ward, F.R.S., 470  
 Potsdam, the New Twin Refractor at, 479  
 Potter (Prof.), on a Bacterial Disease—White Rot—of the Turnip, 66  
 Powell (F. E.), Electric Bells and Alarms, 562  
 Pozzi-Escot (M.), New Micro-chemical Reaction of Copper, 288; New Micro-chemical Reaction of Palladium, 628  
 Practical Instruction in Physics, State of, Dr. Boris Weinberg, 515  
 Practical Mathematics, Prof. John Perry, F.R.S., Prof. A. G. Greenhill, F.R.S., 582  
 Prawns, Changes of Colour of, F. W. Keeble and F. W. Gamble, 552  
 Predominance of Spiral Nebulae, Prof. J. E. Keeler, 87  
 Preece (Sir William Henry, K.C.B., F.R.S.), the Functions of the Engineer, 374; the Relations between Electricity and Engineering, 622  
 Preservative, Formalin as a, 204  
 Pressland (A. J.), Elementary Trigonometry, 390  
 Preston (Prof. Thomas, F.R.S.), Some Remarks on Radiation Phenomena in a Magnetic Field, 11  
 Preston (Dr. Thomas, F.R.S.), Death and Obituary Notice of, 474  
 Preston (H. L.), Illinois Gulch Meteorite, 529; Two New American Meteorites, 626  
 Preventive Medicine, Transactions of the Jenner Institute of (late British Institute of Preventive Medicine), 387  
 Prevosk (J. L.), Death by Electric Discharge, 24; Effects of Electric Discharges on Heart of Mammals, 239  
 Priestley (Sir William), Death and Obituary Notice of, 593  
 Prillieux (M.), the Antibes Carnation Disease, 95; a Caucasian Vine Disease, 383  
 Primeval Scenes, being some Comic Aspects of Life in Pre-historic Times, Rev. H. N. Hutchinson, 150  
 Prior (G. T.), Florentine, 119; the Hamlinite Group of Minerals, 579  
 Prismoidal Formula, the, G. H. Knibbs, 167  
 Prizes proposed by the Paris Academy of Sciences for 1900, 237  
 Progress of Agricultural Chemistry, Prof. Maercker, 116  
 Progress in North-western America, W. A. Baillie-Grohman, 566  
 Pseudo-chalcedonite, A. Lacroix, 407  
 Psychology : Anlage and Rudiment, Prof. J. Mark Baldwin, 29; Dr. W. H. R. Rivers on the Investigations on Comparative Psychology made in Torres Straits and New Guinea, 43; Relative Fidelity of Memory Image, Dr. I. M. Bentley, 60; Evolution of General Ideas, Prof. Th. Ribot, 149; the Royal Society Catalogue and Psychology, Prof. J. Mark Baldwin, 226  
 Purification of Trade Waste, the, R. A. Tatton, 281  
 Purington (C. W.), Mining Industries of Telluride Quadrangle, Colorado, 600  
 Purves (Dr. J. A.), Modern Lighthouse Apparatus, 393  
 Pumping in Mines, Prof. W. Galloway, 606  
 Qualitative Analysis, an Introduction to, H. P. Highton, 514  
 Quartic, Solution of the, G. B. Mathews, 55  
 Quartz, the Smell emitted by, when Rubbed, E. L. Garbett, 491  
 Quartz Thermometers, M. Dufour, 521, 531  
 Quelch (J. J.), Zoology of Mount Roraima, 406  
 Quick (R. W.), Water Boiled by Cold, 60  
 Rabbit, Egg-hatching, 423  
 Races of Man, the, an Outline of Anthropology and Ethnography, J. Deniker, Prof. A. C. Haddon, F.R.S., 462  
 Racial Aspect of Voluntary Enlistment, R. C. T. Evans, 200  
 Radais (M.), Chlorophyll-formation in Dark, 532  
 Radiation, Entropy of, J. Vander Waals, junr., 407  
 Radiation Phenomena, some Remarks on, in a Magnetic Field, Prof. Thomas Preston, F.R.S., 11  
 Radicles in Carbon, Determination of, Dr. H. Meyer, 538  
 Radiography : The Secondary Röntgen Rays, J. S. Townsend, 95; Chemical Action of Röntgen Rays, P. Villard, 143; Measurement of Velocity of Röntgen Rays, B. Brenhes, 311; Influence of Röntgen Rays on Electrical Resistance of Selenium, M. Perreau, 167; Duration of Emission of Röntgen Rays, B. Brunhes, 604; Negative Electrification of Secondary Rays produced by means of Röntgen Rays, P. Curie and G. Sagnac, 604; Fluorescence of Metallic Compounds under Röntgen and Becquerel Rays, Paul Bary, 531; the X-Ray Case Book, for Noting Apparatus, Methods and Results, David Walsh, 150; Radio-activity induced by Becquerel Rays, M. and Mme. Curie, 71; Chemical Effects of Becquerel Rays, M. and Mme. Curie, 120; Magnetic Deflection of Becquerel Rays, F. Giesel, 262; Action of Magnetic Field on Becquerel Rays, P. Curie, 287; Penetration of Becquerel Rays not deviable in Magnetic Field, Mme. Curie, 287; the Absorption of the Becquerel Rays by Solid and Gaseous Bodies, Hon. R. J. Strutt, 539; Origin of Energy of Becquerel Rays, Henri Becquerel, 547; Phosphorescence Phenomena of Radium Radiation, H. Becquerel, 166; Influence of Magnetic Field on Radiation of Radio-active Bodies, H. Becquerel, 192; the Radiation of Radio-active Bodies, H. Becquerel, 239; Effect of Use of Triphase Currents, M. Delézinier, 335; Radium and Polonium Rays in Magnetic Field, Henri Becquerel, 355; Radium and Polonium Rays, Henri Becquerel, 371; the Radium Radiations, Henri Becquerel, 359; Dispersion of Radium Rays in Magnetic Field, Henri Becquerel, 407; Electric Charge of Deviable Radium Rays, M. and Mme. Curie, 483; Negative Charge communicated by Radium Rays, Henri Becquerel, 498; Deviation of Radium Rays in Electric Field, Henri Becquerel, 555; Actinium Rays, A. Debierne, 573, 580; Loss of Phosphorescence by Heat, Gustave le Bon, 579; Transmission of Radium Radiation through Substances, Henri Becquerel, 603; Reflection and Refraction of Kathode and deviable Radium Rays, P. Villard, 604  
 Rae (J. L. C.), Underground Temperature, 484  
 Rail, the Flightless, of New Zealand, Prof. W. B. Benham, 576  
 Rails, Development of Manufacture and Use in Great Britain of, Sir J. L. Bell, F.R.S., 595  
 Rails, Wear in Tunnels of Steel, Thos. Andrews, F.R.S., 595  
 Railway, the Waterloo and City; Methods of Construction, H. H. Dalrymple-Hay, 85; Electrical Equipment, B. M. Jenkin, 85  
 Ranvier (L.), Plastic Activity of Animal Cells, 287  
 Ray (A. C.), Interaction of Mercurous Nitrite and Ethyl Iodide, 264  
 Ray (Sidney H.), on the Linguistic Results of the Cambridge Expedition to Torres Straits and New Guinea, 42  
 Rayleigh (Lord), Scientific Papers, 588  
 Read (H. M.), Japaconitine, 119  
 Reale Instituto Lombardo, Prize Awards, 420  
 Red Sandstone of Shetland, the Old, 80  
 Refraction Effect of Comet Swift (1899 I), Prof. C. D. Perrine, 87

Refractor,  
 Refuse-des  
 Reh (Dr.  
 Reid (Cler  
 Reid (Sir  
 Playfair  
 121  
 Reid (W.  
 121  
 Reinders  
 71  
 Religion :  
 Future  
 Rede F  
 L. W. F  
 Reliquary,  
 Renard (A  
 Renault (E  
 Rennie (M  
 venene,  
 Represent  
 Reptiles :  
 Diplodo  
 Research,  
 Resistance  
 107, 248  
 Resonance  
 Respiratio  
 REVIEWS  
 The Th  
 Histor  
 Boys,  
 Geschich  
 Gerlar  
 The Dis  
 Analyses  
 Essais d  
 Chemist  
 Natural  
 Man, th  
 Hall,  
 The Rel  
 The Sil  
 J. Ho  
 Essai C  
 Conte  
 Elemen  
 F.R.S.  
 A Lab  
 Smith  
 Ueber d  
 Beasts :  
 The Ca  
 Sharp  
 The In  
 50  
 Einführ  
 Dr. I  
 Laborat  
 of Ch  
 L'Indus  
 Jaube  
 Elemen  
 The Ne  
 Wake  
 The Na  
 Jeffer  
 Arithme  
 Traité  
 Ther  
 73  
 Second  
 nell  
 Surgery  
 Pick  
 Elemen  
 Merr  
 Experim  
 Greg  
 Tito N

Refractor, the New Twin, at Potsdam, 479  
 Refuse-destruction and Steam-raising, C. N. Russell, 185  
 Reh (Dr. L.), Symmetry and Asymmetry in Animals, 186  
 Reid (Clement), Geology of Country round Dorchester, 113  
 Reid (Sir Wemyss), Memoirs and Correspondence of Lyon Playfair, First Lord Playfair of St. Andrews, LL.D., F.R.S., 121  
 Reid (W. F.), Velvill, 59  
 Reinders (Dr. W.), Mixture Crystals of  $HgI_2$  with  $HgBr_2$ , 71  
 Religion: Books on Egypt and Chaldea, Egyptian Ideas of the Future Life; Egyptian Magic, E. A. Wallis Budge, Frank Rede Fowke, 437; Babylonian Religion and Mythology, L. W. King, Frank Rede Fowke, 437  
 Reliquary, the, and Illustrated Archaeologist, 6  
 Renard (A. F.), Notions de Mineralogie, 610  
 Renault (B.), New Bacteria in Coal, 508  
 Rennie (Major S. J.), Snake Bite Cured by Calmette's Antivenene, 85  
 Representation of the University of London, 275  
 Reptiles: a Complete Mosasaur's Skeleton and a Skeleton of Diplodocus, H. F. Osborn, 534  
 Research, the Indian University of, 260  
 Resistance of the Air, the, 248; Prof. G. H. Bryan, F.R.S., 107, 248  
 Resonance, an Interesting Case of, Kenneth McMurtrie, 445  
 Respiration, Exercise and, Dr. A. Foxwell, 39  
 REVIEWS AND OUR BOOKSHELF:  
 The Theory of Water Finding by the Divining Rod: its History, Method, Utility and Practice, B. Tompkins, C.; V. Boys, F.R.S., 1  
 Geschichte der Physikalischen Experimentierkunst, Dr. E. Gerland and Dr. F. Trauttmüller, 4  
 The Diseases of Children, G. Elder and J. S. Fowler, 5  
 Analyses Électrolytiques, Ad. Minet, 5  
 Essais des Huiles Essentielles, Henri Labbé, 5  
 Chemistry for Organised Schools of Science, S. Parrish, 5  
 Natural and Artificial Methods of Ventilation, 6  
 Man, the Microcosm, Part I., the Nature of Man, Leonard Hall, 6  
 The Reliquary and Illustrated Archaeologist, 6  
 The Silurian Rocks of Britain, B. N. Peach, F.R.S., and J. Horne, 25  
 Essai Critique sur l'Hypothèse des Atomes dans la Science Contemporaine, Arthur Hannequin, 26  
 Elements of Physics, Henry Crew, Prof. Arthur Schuster, F.R.S., 27  
 A Laboratory 'Outline of General' Chemistry, Alexander Smith, 27  
 Ueber den Habitus der Coniferen, Dr. A. H. Burt, 28  
 Beasts: Thumbnail Studies in Pets, Wardlaw Kennedy, 28  
 The Cambridge Natural History. Insects, Part II., David Sharp, W. F. H. Blandford, 49  
 The International Geography, Prof. T. G. Bonney, F.R.S., 50  
 Einführung in die Chemie in leichtfasslicher Form, Prof. Dr. Lassar-Cohn, 51  
 Laboratory Manual, Experiments to Illustrate the Principles of Chemistry, H. W. Hillyer, 52  
 L'Industrie des Matières Colorantes Azoïques, George F. Jaubert, 53  
 Elementary Practical Mathematics, Frank Castle, 53  
 The New Education, Manual Training: Woodwork, Richard Wake, 53  
 The Naval Pioneers of Australia, Louis Becke and Walter Jeffery, 53  
 Arithmetical Exercises in Chemistry, Leonard Dobbin, 53  
 Traité Élémentaire de Mécanique Chimique, fondée sur la Thermodynamique, P. Duhem, Prof. G. H. Bryan, F.R.S., 73  
 Seconda Spedizione Bottego. L'Omo. Viaggio d'Esplorazione nell'Africa Orientale, L. Vannutelli and C. Citeri, 75  
 Surgery: a Treatise for Students and Practitioners, Thomas Pickering-Pick, 76  
 Elements of Precise Surveying and Geodesy, Mansfield Merriman, Sir C. W. Wilson, K.C.B., F.R.S., 77  
 Experimental Science (Physiology, Section I), R. A. Gregory and A. T. Simmons, 77  
 Tito Nenci. I. Bachi da Seta, 77

Types of British Animals, F. G. Adalo, 77  
 Marriages of the Deaf in America, Edward Allen Fay, Dr. Macleod Yearsley, 97  
 The Rise and Development of the Liquefaction of Gases, Willet L. Hardin, 98  
 La Liquefaction des Gaz et ses Applications, Prof. Julien Lefèvre, 98  
 Studien zur Geographie, Dr. W. Kobelt, 99  
 The Steam Engine and Gas and Oil Engines, John Perry, F.R.S., 100  
 Practical Plane and Solid Geometry for Advanced Students, including Graphic Statics, J. Harrison and G. A. Baxandall, 101  
 Grundlinien der maritimen Meteorologie, W. Köppen, 101  
 Inorganic Chemical Preparations, Felix Lengfeld, 101  
 The Utility of Sulphate of Ammonia in Agriculture, James Muir, 101  
 Euclid, Books I.-IV., Charles Smith and Sophie Bryant, 102  
 Sylvia in Flowerland, Linda Gardiner, 102  
 Magnetism and Electricity, J. Paley Yorke, 102  
 Field and Folklore, Harry Lowerison, 102  
 Memoirs and Correspondence of Lyon Playfair, First Lord Playfair of St. Andrews, P.C., G.C.B., LL.D., F.R.S., Wemyss Reid, 121  
 Alaska and the Klondike, Angelo Heilprin, 122  
 Inorganic Chemistry for Advanced Students, Sir Henry E. Roscoe, F.R.S., and Arthur Harden, 125  
 Elements of Natural Philosophy, Alfred Earl, 125  
 Elementary Practical Chemistry, A. J. Cooper, 126  
 The Teaching of Geography in Switzerland and North Italy, Joan Berenice Reynolds, 126  
 Liverpool Marine Biology Committee's Memoirs, *Ascidia*, Prof. W. A. Herdman, F.R.S., 126  
 The Story of the Wanderings of Atoms, especially those of Carbon, M. M. Pattison Muir, 126  
 General Index, by Robert Newstead, F.E.S., Curator of the Grosvenor Museum, Chester, to Annual Reports of Observations of Injurious Insects, 1877-1898, Eleanor A. Omerod, 126  
 A Hand-list of the Genera and Species of Birds, R. Bowdler Sharpe, 126  
 Human Nature: its Principles and the Principles of Physiology, 127  
 Geschichte der Geologie und Paläontologie bis Ende des 19. Jahrhunderts, Karl Alfred v. Zittel, 145  
 The Students' Flora of New Zealand and the Outlying Islands, Thomas Kirk, W. Botting Hemsley, F.R.S., 146  
 List of the Genera and Species of New Zealand Plants, A. Hamilton, W. Botting Hemsley, F.R.S., 146  
 Encyclopædia Biblica, Rev. T. K. Cheyne and J. S. Black, 148  
 Statistical Methods, with Special Reference to Biological Variation, C. B. Davenport, 149  
 Evolution of General Ideas, Prof. Th. Ribot, 149  
 Handbook of Optics for Students of Ophthalmology, Prof. William Norwood Suter, 149  
 Optics: a Manual for Students, A. S. Percival, 149  
 A Practical Introduction to the Study of Botany: Flowering Plants, Prof. J. Bretland Farmer, 150  
 Primeval Scenes: being some Comic Aspects of Life in Prehistoric Times, Rev. H. N. Hutchinson, 150  
 A Treatise on Surveying, R. E. Middleton and O. Chadwick, 150  
 The X-Ray Case Book for Noting Apparatus, Methods and Results, David Walsh, 150  
 The Wheat Problem, Sir William Crookes, F.R.S., Sir R. Giffen, K.C.B., F.R.S., 169  
 Atlas of Meteorology, J. G. Bartholomew and A. J. Herbertson, 171  
 The North American Slime Moulds, Prof. T. H. McBride, 173  
 An Introduction to the Study of Materia Medica, Henry G. Greenish, 174  
 Descriptive General Chemistry, S. E. Tilman, 175  
 Zoologia, Prof. Achille Griffini, 175  
 The British Journal Photographic Almanac for 1900, 175  
 The Elements of Blowpipe Analysis, Frederick Hutton Getman, 176  
 The Elements of Euclid, R. Lachlan, 176  
 Essai du Commerce et de l'Industrie, L. Cuniasse and R. Zwilling, 176

- Dairy Chemistry, H. Droop Richmond, 176  
 A Manual of Surgical Treatment, Prof. W. Watson Cheyne, F.R.S., and F. F. Burghard, 176  
 Eaglehawk and Crow: a Study of the Australian Aborigines, including an Inquiry into their Origin and a Survey of Australian Languages, John Mathew, Prof. Alfred C. Haddon, F.R.S., 193  
 A Catalogue of the Cyprus Museum, with a Chronicle of Excavations undertaken since the British Occupation and Introductory Notes on Cypriote Archaeology, John L. Myres and Max Ohnefalsch-Richter, 195  
 The Strength of Materials, Prof. J. A. Ewing, F.R.S., 197  
 Metallurgy of Lead and Silver, Henry F. Collins, 198  
 Zur Stereochemie des fünfwertigen Stickstoffes mit besonderer Berücksichtigung des asymmetrischen Stickstoffes in der aromatischen Reihe, Edgar Wedekind, 199  
 Handbook of Metallurgy, Dr. Carl Schnabel, Sir W. C. Roberts-Austen, K.C.B., F.R.S., 199  
 La Philosophie Naturelle, Dr. W. Nicati, 199  
 Kleiner Leitfaden der Practischen Physik, Dr. F. Kohlrausch, 200  
 Elementary Algebra, C. H. French and G. Osborn, 200  
 Magnetism and Electricity for Beginners, H. E. Hadley, 200  
 Colour in Nature: a Study in Biology, Marion I. Newbigin, 217  
 Experimental Morphology, Charles Benedict Davenport, 218  
 Die hochgebirge der Erde, Robert von Lendenfeld, Prof. T. G. Bonney, F.R.S., 219  
 Beginselen der Scheikunde, Dr. M. C. Schuyten, 220  
 Students' Edition of a Standard Dictionary of the English Language, 220  
 The Standard Intermediate School Dictionary of the English Language, 220  
 Outlines of Bacteriology, Dr. L. H. Thoinot and E. J. Masselin, 221  
 Lehrbuch der Experimental Physik, Adolph Wüllner, 221  
 Proceeding of the Eleventh Annual Meeting of the Association of Economic Entomologists, 221  
 Elementary Dynamics, W. M. Baker, 221  
 Handbook of Physics and Chemistry, H. E. Corbin and A. M. Stewart, 221  
 Handbuch der Astronomischen Instrumentenkunde, Dr. L. Ambronn, 241  
 Die Optischen Instrumente der Firma R. Fuess deren Beschreibung, Justierung und Anwendung, C. Leiss, 241  
 A History of Wireless Telegraphy, 1838-1899, J. J. Fahie, 243  
 La Télégraphie sans Fils, André Broca, 243  
 Biological Lectures from the Marine Biological Laboratory, Woods Holl, Massachusetts, 1898, 244  
 Darstellung der 32 möglichen Krystallklassen, Prof. H. Baumhauer, 245  
 The Essex Naturalist: the Journal of the Essex Field Club, 245  
 Anleitung zur Darstellung chemischer Präparate. Ein Leitfaden für den praktischen Unterricht in der Anorganischen Chemie, Prof. Dr. H. Erdmann, 246  
 The Boyhood of a Naturalist, Fred Smith, 246  
 Newton's Laws of Motion, Prof. P. G. Tait, 265  
 Physical Geography, Prof. W. M. Davis and W. H. Snyder, 266  
 Bartlett's Life among Wild Beasts in the Zoo, the late A. D. Bartlett, 267  
 Recherches Experimentales sur les Oscillations Électriques, A. Turpain, 268  
 Indicators and Test Papers, Alfred I. Cohn, 269  
 Optical Activity and Chemical Composition, Dr. H. Landolt, 269  
 Science and Faith; or, Man as an Animal and Man as a Member of Society, with a Discussion of Animal Societies, Dr. Paul Topinard, 270  
 Who's Who, 1900, 270  
 The Englishwoman's Year-book and Directory, 1900, 270  
 Le Phénomène de Zeeman, A. Cotton, 270  
 Dictionnaire des Termes de Médecine, Français-Anglais, H. de Méric, 270  
 The Kinetic Theory of Gases, Dr. Oskar Emil Meyer, Prof. G. H. Bryan, F.R.S., 289  
 A Treatise on the Kinetic Theory of Gases, S. H. Burbury, F.R.S., Prof. G. H. Bryan, F.R.S., 289  
 A Descriptive Catalogue of the Indian Deep-sea Fishes in the Indian Museum, 291  
 An Account of the Deep-sea Brachyura: being Systematic Reports upon the Materials collected by the Royal Indian Marine Survey Ship *Investigator*, 1874-1899, A. Alcock, 291  
 A Glimpse at Guatemala, and some Notes on the Ancient Monuments of Central America, Anne Carey Maudslay and Alfred Percival Maudslay, A. H. Keane, 292  
 Das Geschlecht der Pflanzen, R. J. Camerarius, 293  
 Journals and Papers of Chauncy Maples, D.D., F.R.G.S., late Bishop of Likoma, Lake Nyasa, 294  
 Leçons de Chimie Physique, J. H. van 't Hoff, 294  
 Gli Agrumi, Prof. Antonio Aloï, 294  
 Star-land, Sir Robert S. Ball, F.R.S., 294  
 Brain in Relation to Mind, J. Sanderson Christison, 295  
 L'Année Biologique, 313  
 Exercices d'Arithmétique, J. Fitz-Patrick and G. Chevrel, 314  
 In Dwarf Land and Cannibal Country, a Record of Travel and Discovery in Central Africa, A. B. Lloyd, 314  
 Telephotography, Thomas R. Dallmeyer, 315  
 Ueber einige Aberrationen von Papilio machaon, Dr. J. W. Spengel, 316  
 A Koelliker's Handbuch der Gewebelehre des Menschen, Victor v. Ebner, 316  
 The Evolution of Geography, a Sketch of the Rise and Progress of Geographical Knowledge from the Earliest Times to the First Circumnavigation of the Globe, John Keane, 317  
 First Steps in Earth-knowledge, being an Introduction to Physiography (Section I.), J. A. Harrison, 317  
 Die Orkane des "Fernen Ostens," Prof. Dr. Paul Bergholz, 317  
 Volumetric Analysis, John B. Coppock, 317  
 Our Rarer British Breeding Birds, their Nests, Eggs, and Summer Haunts, R. Kearton, 323  
 The Birds of Rhode Island, R. H. Howe, jun., and E. Sturtevant, 323  
 The Birds of Eastern North America: Water Birds, Part I., Key to the Families and Species, C. B. Cory, 323  
 The Letters of Faraday and Schönbein, 1836-1862, with Notes, Comments, and References to Contemporary Letters, Prof. R. Meldola, F.R.S., 337  
 The History of the European Fauna, R. F. Scharff, 341  
 Le Cidre, X. Rocques, 342  
 Liverpool School of Tropical Diseases, 342  
 Our Insect Friends and Foes: How to Collect, Preserve, and Study Them, Belle S. Cragin, 342  
 The Passing of the Empires, G. Maspero, 361  
 The Fishes of North and Middle America, David Starr Jordan and Barton Warren Evermann, 362  
 Die Photographie der Gestirne, Dr. J. Scheiner, 363  
 Euclid's Elements of Geometry, Charles Smith and Sophie Bryant, 365  
 A First Book in Statics and Dynamics, Rev. J. R. Robinson, 365  
 Life and Happiness, Auguste Marrot, 365  
 Compendium of Geography and Travel, Geo. G. Chisholm, Dr. Hugh Robert Mill, 368  
 Fixierung, Färbung, und Bau des Protoplasmas. Kritische untersuchungen ueber Technik und Theorie in der neueren Zellforschung, Dr. Alfred Fischer, Prof. J. B. Farmer, 385  
 Transactions of the Jenner Institute of Preventive Medicine (late British Institute of Preventive Medicine), 387  
 The Scientific Basis of Morality, Dr. G. Gore, 389  
 Exercises in Practical Physics, R. A. Gregory and A. T. Simmons, 390  
 Abhandlung der Dynamik, D'Alembert, 390  
 Ueber die Mathematische Theorie der electrodynamischen Induction, Ricardo Felici, 390  
 Équilibre des Systèmes Chimiques, J. Willard Gibbs, 390  
 Elementary Trigonometry, A. J. Pressland and Ch. Tweedie, 390  
 A Century of Science and other Essays, John Fiske, 390  
 The Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, Daniel C. Gilman, Prof. John W. Judd, C.B., F.R.S., 409  
 Billiards Mathematically Treated, G. W. Hemming, S. H. Burbury, F.R.S., 410

- A Rudimentary Treatise on Coal and Coal Mining, the late Sir Warrington W. Smyth, F.R.S., Bennett H. Brough, 411
- Untersuchungen über die Chemischen Affinitäten, C. M. Guldberg and P. Waage, 412
- How to Know the Ferns, Frances Theodora Parsons, 412
- Laboratory Note-book for Chemical Students, Prof. Vivian B. Lewes and J. S. S. Brame, 412
- The Elements of Co-ordinate Geometry, J. H. Grace and F. Rosenberg, 412
- Books on Egypt and Chaldea, Egyptian Ideas of the Future Life, Egyptian Magic, E. A. Wallis Budge, Frank Rede Fowke, 437
- Babylonian Religion and Mythology, L. W. King, F.S.A., Frank Rede Fowke, 437
- The Scientific Memoirs of Thomas Henry Huxley, 440
- The Scientific Study of Scenery, John E. Marr, F.R.S., 441
- Plant Relations: a First Book of Botany, John Coulter, Prof. J. B. Farmer, 442
- Elementary Chemistry for High Schools and Academies, Albert L. Arey, 442
- A Manual of Chemistry, Inorganic and Organic, Dr. Arthur P. Luff and Frederic J. M. Page, 412
- Dictionary of the Lepcha Language, General G. B. Mainwaring, 442
- Les Sucres et leurs Principaux Dérivés, L. Maquenne, Prof. R. Meldola, F.R.S., 461
- The Races of Man; an Outline of Anthropology and Ethnography, J. Deniker, Prof. A. C. Haddon, F.R.S., 462
- System der Bakterien, Dr. W. Migula, Dr. E. Klein, F.R.S., 464
- Ouvres Scientifiques de L. Lorenz, Revues et Annotées, H. Valentiner, 465
- Theory and Practice of Art Enamelling upon Metals, Henry Cunyngame, 466
- The Witness of Creation, Nature Sketches from the Book of Job, M. Cordelia Leigh, 466
- La Céramique Ancienne et Moderne, E. Guignet and E. Garnier, 466
- A Treatise on Crystallography, W. J. Lewis, Prof. H. A. Miers, F.R.S., 485
- Wilhelm Olbers, sein Leben und seine Werke, Dr. C. Schilling, Dr. J. L. E. Dreyer, 486
- Catalogue of a Collection of Objects illustrating the Folklore of Mexico, Prof. Frederick Starr, 488
- A First Book in Organic Evolution, D. Kerfoot Shute, 488
- Mining Engineers' Report Book, and Directors' and Shareholders' Guide to Mining Reports, Edwin R. Field, 489
- Flora of Kent, F. J. Hanbury and E. S. Marshall, 489
- Leitfaden für den Unterricht in der Anorganischen Chemie, Dr. Joachim Sperber, 489
- Aufgaben aus der Chemie und der physikalischen Chemie, Dr. P. Bräuer, 489
- Die Photometrie der Gestirne, Prof. Dr. G. Müller, 509
- Histoire des Mathématiques, J. Boyer, 510
- Theorie und Geschichte des photographischen Objectivs, Moritz von Rohr, 511
- Experiments on Animals, Stephen Paget, 512
- Cyclopedia of Classified Dates, Charles E. Little, 513
- Justus von Liebig and Christian Freidrich Schonbein Briefwechsel, 1853-1868, Georg W. A. Kahlbaum and Eduard Thon, 513
- Cina e Giappone, E. von Hesse Wartegg, 513
- Practical Chemistry, William French, 514
- An Introduction to Qualitative Analysis, H. P. Highton, 514
- Essai de Chronologie des Temps Préhistoriques, M. Roisel, 514
- Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the Pursuit of Celestial Photography, Isaac Roberts, F.R.S., Dr. William J. S. Lockyer, 533
- A Complete Mosasaur's Skeleton and a Skeleton of Diplodocus, H. F. Osborn, 534
- Temperate Chile, a Progressive Spain, W. Anderson Smith, Dr. Hugh Robert Mill, 536
- List of Published Names of Plants introduced to Cultivation, 1876-1896, Kew Bulletin of Miscellaneous Information, Dr. Maxwell T. Masters, F.R.S., 537
- Hand-list of Tender Dicotyledons Cultivated in the Royal Gardens, Kew, Dr. Maxwell T. Masters, F.R.S., 537
- Les Arbres à Gutta-percha, leur culture, Mission relative à l'acclimation de ces Arbres aux Antilles et la Guyane, Henri Lecomte, 538
- Determination of Radicles in Carbon Compounds, Dr. H. Meyer, 538
- Unités électriques absolues, Prof. G. Lippmann, 539
- Elementary Practical Physiography, J. Thornton, 539
- Atlas de Photomicrographie des Plantes Médicinales, Drs. Braemer et Suis, 539
- A Text-book of Physics, W. Watson, Prof. Hugh L. Callendar, F.R.S., 557
- Heat for Advanced Students, Edwin Edser, Prof. Hugh L. Callendar, F.R.S., 557
- Text-book of Experimental Physics, Eugene Lommel, Prof. Hugh L. Callendar, F.R.S., 557
- A Manual of Zoology, Prof. T. J. Parker and Prof. W. A. Haswell, 559
- An Elementary Course of Practical Zoology, Prof. T. J. Parker and Prof. W. N. Parker, 559
- Practical Exercises in Elementary Meteorology, Robert De Courcy Ward, 560
- Lectures on some of the Physical Properties of Soil, Robert Warrington, F.R.S., 561
- Electric Wiring, Fittings, Switches and Lamps, W. Perren Maycock, 562
- Electric Bells and Alarms, F. E. Powell, 562
- Report of the Marine Biologist for the Year 1898, Cape of Good Hope Department of Agriculture, E. J. Allen, 562
- Science Course for Secondary Schools, G. Robb and J. Mirguet, 562
- L'Echappement dans les Machines à Vapeur, G. Leloutre, 563
- Produits Aromatiques; Artificiels et Naturels, Dr. G. F. Jaubert, 563
- Grundzüge der geographisch-morphologischen Methode der Pflanzensystematik, Dr. R. von Wettstein, 563
- Dreams of a Spirit-seer, illustrated by Dreams of Metaphysics, Immanuel Kant, 563
- The Distribution of Income, William Smart, Sir R. Giffen, K.C.B., F.R.S., 581
- Practical Mathematics, Prof. John Perry, F.R.S., Prof. A. G. Greenhill, F.R.S., 582
- A System of Medicine by Many Writers, Dr. F. W. Tunnicliffe, 584
- A Book on Whales, F. E. Beddard, F.R.S., 585
- Microscopic Researches on Glycogen, Charles Creighton, 586
- The Elements of Alternating Currents, W. S. Franklin and R. B. Williamson, 587
- Oysters and Disease: an Account of Certain Observations upon the Normal and Pathological Histology and Bacteriology of the Oyster and other Shellfish, Profs. W. A. Herdman, F.R.S., and R. Boyce, 587
- Scientific Papers, John William Strutt, Baron Rayleigh, F.R.S., 588
- Ueber das System der Nagethiere; eine phylogenetische Studie, Tycho Tullberg, 588
- A Surgical Operating Table for the Horse, J. A. W. Dollar, 588
- The Birds of Celebes and the Neighbouring Islands, A. B. Meyer and L. W. Wigglesworth, 605
- Mine Drainage: being a Complete Practical Treatise on Direct Acting Underground Steam Pumping Machinery, Stephen Michell, Prof. W. Galloway, 606
- Text-book of Palæontology, Karl A. von Zittel, 608
- Les Êtres Vivants. Organisation—Evolution, Paul Busquet, 609
- Notions de Minéralogie, A. F. Renard and F. Stöber, 610
- Muret-Sander's Encyclopædic English-German and German-English Dictionary, 610
- Die Elemente der Entwicklungslehre des Menschen und der Wirbelthiere, O. Hertwig, 610
- Reynolds (Joan Berenice), the Teaching of Geography in Switzerland and North Italy, 126
- Rhabdospheres, Coccospheres and, George Murray, F.R.S., 54
- Rhodie Island, the Birds of, R. H. Howe, jun., and E. Sturtevant, 323
- Ribot (Prof. Th.), Evolution of General Ideas, 149
- Rice Culture in United States of America, Dr. S. A. Knapp, 401
- Richardson (Dr. S. W.), Magnetic Properties of Iron and Aluminium Alloys, 23

- Richarz (F.), Analysis of Oscillating Discharges by Means of Braun Tube, 627
- Richet (Ch.), Effect of Diet poor in Chlorides upon the Treatment of Epilepsy by Sodium Bromide, 120; Treatment of the Tuberculous by Zomotherapy, 459
- Richter (Dr. Eduard), Advance and Retreat of Alpine Glaciers during Ice Age, 207
- Rickmers (W. R.), Conglomerates of East Bokhara, 59
- Rideal (Dr. S.), Food-preserving Methods, 519
- Rider, the Fitting of the Cycle to its, R. E. Crompton, 87, 391; C. Crompton, 87; D. E. Hutchins, 368; Wm. H. Massey, 391
- Riecke (E.), Distribution of Free Electricity at Surface of Crookes' Tube, 262
- Rinderpest and Serotherapy in India, 157
- Ring Nebula in Lyra, Central Star of, W. Stratonoff, 260
- Ripper (Prof. W.), Technical Instruction in Relation to Industrial Progress, 356
- Rivers (Dr. W. H. R.), on the Investigations on Comparative Psychology made in Torres Straits and New Guinea, 43; on Two New Methods of Anthropological Research, 44
- Rizzo (Dr. G. B.), New Mode of using Concave Diffraction Grating, 501, 541
- Robb (G.), Science Course for Secondary Schools, 562
- Roberts (Dr. Isaac, F.R.S.), Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the Pursuit of Celestial Photography, 533
- Roberts (Rev. W. R. W.), Studies in Integrals, 383
- Roberts-Austen (W. C., K.C.B., F.R.S.), Handbook of Metallurgy, Dr. Carl Schnabel, 199
- Robertson (Dr. W. G. A.), Diminished Digestive Activity of Saliva in Certain Diseases, 531
- Robinson (Rev. J. R.), a First Book in Statics and Dynamics, 365
- Robinson (Mark), on the Niclausse Water-tube Boiler, 21
- Rock Paintings, Grey's, H. Ling Roth, 248
- Rock Structures in Isle of Man and South Tyrol, G. W. Lamplugh, 612
- Rocking Microtome, a New, 115
- Rocques (X.), le Cidre, 342
- Rodents: Ueber das System der Nagethiere, Dr. Tycho Tullberg, 588
- Rogers (Mr.), the Orange River Ground Moraine near Prieska, 240
- Rohr (Moritz von), Theorie und Geschichte des photographischen Objectivs, 511
- Roisel (M.), Essai de Chronologie des Temps Préhistorique, 514
- Romney Marshes, on the Dymchurch Sea-wall and the Reclamation of the, Edward Case, 22
- Röntgen Rays, the Secondary, J. S. Townsend, 95; Chemical Action of Röntgen Rays, F. Villard, 143; Influence on Electrical Resistance of Selenium, M. Perreau, 167; Measurement of Velocity of Röntgen Rays, B. Brunhes, 311; Fluorescence of Metallic Compounds under Becquerel and Röntgen Rays, Paul Bary, 531; Duration of Emission of Röntgen Rays, B. Brunhes, 604; Negative Electrification of Secondary Rays produced by means of Röntgen Rays, P. Curie and G. Sagnac, 604
- Rosa (E. B.), Law of Conservation of Energy in Human Organism, 258
- Roscoe (Sir Henry E., F.R.S.), Inorganic Chemistry for Advanced Students, 125
- Rosenberg (F.), the Elements of Co-ordinate Geometry, 412
- Rosenstiel (A.), Yeast Increase without Fermentation in Presence of Limited Quantity of Air, 336
- Ross (Major Ronald), Malaria and Mosquitoes, 522
- Rostrum, the, of "Mesoplonon," Dr. Henry O. Forbes, 490
- Rotation Period of Venus, 574
- Rotch (A. Lawrence), Meteorology at the Berlin Geographical Congress, 177; the Eclipse Wind, 589
- Roth (H. Ling), Grey's Rock Paintings, 248
- "Rotten Stone" Granite of East Finland, the, Boris Popoff, 285
- Rotterdam, the van 't Hoff Celebration at, Dr. H. M. Dawson, 321
- Rothé (E.), Wehnelt's Electrolytic Interrupter, 48
- Rowe (Dr. A. W.), Zones in the Chalk, 625
- Rowland (S.), Influence of Temperature of Liquid Air on Bacteria, 603
- Royal Irish Academy, 143, 191, 383, 407, 507
- Royal Society, 93, 213, 262, 285, 311, 357, 405, 432, 480, 504, 529, 555, 577, 603; Medal Awards, 58; Anniversary Meeting of the, 137; the Royal Society Catalogue and Psychology, Prof. J. Mark Baldwin, 226
- Rubber, Mangabeira, 38
- Rubber, Possible Substitute for, "Velvrl," W. F. Reid, 59
- Rubber, New Method for Extraction from *Landolphia* Bark of, A. Arnaud and A. Verneuil, 360
- Rubens (H.), Reflective Power of Metals, 555
- Rücker (Prof.), Antarctic Exploration, 19
- Rudiment, Anlage and, Prof. J. Mark Baldwin, 29
- Rudski (P.), the Elastic Properties of Rocks, 113
- Ruhemann (S.), Formation of Tetrazoline, 94; Heterocyclic Compounds, 405
- Rum, the Micro-organism of Faulty, V. H. Veley, F.R.S., and Lilian J. Veley, 468
- Rümker (Dr. G.), Death and Obituary Notice of, 473
- Rural Education, John C. Medd, 55; Prof. R. Meldola, F.R.S., 55; C. H. Bothamley, 55
- Rural Schools, Nature Study in, 553
- Russell (C. N.), Refuse Destruction and Steam-raising, 185
- Russell (E. J.), Combination of Sulphur Dioxide with Oxygen, 434; Influence of "Nascent State" on Combination of Dry Carbon Monoxide and Oxygen, 434
- Russell (H. C., F.R.S.), Current Papers, 167
- Russian Ice-breaker, *Yermak*, Account of the Trial Trip of the Great, Admiral Makaroff, 17
- Russian Geographical Society's Prize Awards, 397
- Rutley (Frank), Eruptive Rocks from New Zealand, 603
- Ryther (L. E.), the Focal Depth of Microscopic Objectives, 16
- Rzewuski (A. von), Electrolytic Interruption for Feeble Currents, 627
- Sabatier (Paul), Action of Copper on Acetylene, 360
- Sagnac (M.), Kinematical Theory of Propagation of Light, 136; Negative Electrification of Secondary Rays produced by means of Röntgen Rays, 604
- St. Louis Academy of Science, 215
- St. Petersburg University Society of Naturalists, Memoirs of, 285
- Salamander, the American Gilled and Blind, *Typhlomolge*, Dr. Stejneger, 620
- Salmon-hatching in Norway, 39
- Salmon (E. S.), Peculiar Structures on Peritheces of *Phyllactinea Coryleae*, 46
- Salt Lake Problem, a Great, 204
- Salvadori (R.), New Lines in Infra-red Spectrum of Argon, 235
- Sand, Floating, F. W. Simonds, 500
- Sand-dunes Bordering the Delta of the Nile, on the, Vaughan Cornish, 20, 403
- Sandstone, the Old Red, of Shetland, 80
- Saner (J. A.), Pontoon-based Swing Bridges at Northwich, 327
- Sanitation: Death and Obituary Notice of Sir Richard Thorne Thorne, K.C.B., F.R.S., 183
- Sarawak, Native Life and Customs in, Prof. A. C. Haddon, 578; C. Hose, 578
- Savage Music in Murray Island and Sarawak, C. S. Myers, 42
- Scarcity, the Coming Wheat, Sir R. Giffen, K.C.B., F.R.S., 169
- Scenery, the Scientific Study of, John E. Marr, F.R.S., 441
- Schäffer (Dr. Hermann), Death of, 397
- Scharff (Dr. R. F.), the History of European Fauna, 341; a Pyrenean Land Planarian, 458
- Scheikunde, Beginselen der, Dr. M. C. Schuyten, 220
- Schneider (Dr. J.), Die Photographie der Gestirne, 363; Variations in the Spectra of the Orion Nebula, 114
- Schlich (Prof. W.), Botany and the Indian Forest Department, 6
- Schliep (Dr.), Atmospheric Electricity and Disease, 471
- Schmidt (W.), Hero of Alexandria, 202
- Schnabel (Dr. Carl), Handbook of Metallurgy, 199
- Scholl (Dr. R.), Constitution of Fulminates, 236
- Schönbein, the Letters of Faraday and, 1836-1862; with Notes, Comments, and References to Contemporary Letters, Prof. R. Meldola, F.R.S., 337
- Schönbein (Christian Friedrich), und Justus von Liebig-Briefwechsel, 1853-1868, Georg W. A. Kahlbaum und Eduard Thon, 513

- School Dictionary of the English Language, the Standard Intermediate, James C. Fernald, 220
- School Gardens, G. B. Smith, 455
- School Science and Knowledge-making Power, G. H. Wyatt, 274
- Schools, Nature Study in Rural, 553
- Schools of Science, Chemistry for Organised, S. Parrish, 5
- Schott (Dr. Gerhard), on the Chief Results of the Voyage of the *Valdivia*, 19
- Schrenk (Dr. H. von), a Fungus-disease of Cypress and Cedar, 452
- Schurr (Henry S.), Barisal Guns, 127
- Schuster (Prof. Arthur, F.R.S.), Elements of Physics, 27; Constitution of Electric Spark, 258
- Schuyten (Dr. M. C.), Beginselen der Scheikunde, 220
- Schwalbe (Prof. G.), Escher's Theory of Atmospheric Electricity, 546, 554
- Schwarz (Mr.), the Orange River Ground Moraine near Prieska, 240; a Plesiosaurian from Uitenhage, Cape Colony, 544
- Schwabschild (Dr. K.), Computation of Orbits of Spectroscopic Doubles, 521
- Science: Chemistry for Organised Schools of Science, S. Parrish, 5; Conference of German Men of Science at Munich, 62; Experimental Science (Physiography: Section i.), R. A. Gregory and A. T. Simmons, 77; Testimonial to Major-General Sir J. F. D. Donnelly, K.C.B., 132; the Relation between Science and Medicine, Sir J. Burdon Sanderson, Bart., 254; the Science of Land Form, 266; Science and Faith; or, Man as an Animal and Man as a Member of Society; with a Discussion of Animal Societies, Dr. Paul Topinard, 270; School Science and Knowledge-making Power, G. H. Wyatt, 274; Science Teachers in Conference, 283; the Scientific Basis of Morality, Dr. G. Gore, 389; a Century of Science and other Essays, John Fiske, 390; Mr. Balfour on Scientific Research, 395; the Scientific Memoirs of Thomas Henry Huxley, 440; Forthcoming Books of Science, 502; Science Course for Secondary Schools, G. Robb and J. Mirguet, 562
- Scientific Lens-making, Moritz von Rohr, 511
- Scotland: The Silurian Rocks of Britain. Vol. i. Scotland, B. N. Peach, F.R.S., and J. Horne, 25; on *Theodus Pagei* from the Old Sandstone of Forfarshire, and Report on the Fossil Fishes collected by the Geolog. Survey of Scotland in the Silurian Rocks of the South of Scotland, R. H. Traquair, F.R.S., 307; Stone Circles in Scotland, A. L. Lewis, 530; Suicide in, Sir John Sibbald, 531
- Scott (A.), Pure Hydrobromic Acid, 530; New Sulphide of Arsenic, 530
- Scott (Dr. D. H., F.R.S.), the Sphenophyllales, 627
- Scott (Dr. R. H., F.R.S.), Diurnal Rain-ranges 1871-1890, 399; Percolation Experiments at Rothamsted, 435
- Sculpture, Natural Objects in Old Spanish, Dr. E. S. Fatigati, 15
- Scurvy, Bacterial Origin of, Prof. A. M. Lévin, 400
- Sea, Stockholm International Conference on the Exploration of the, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; Geo. Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413
- Sea, the Problem of Coaling at, 430
- Sea-angling, the Necessity for Legislative Regulation of, F. G. Adalo, 235
- Sea-fisheries of Jamaica, Mr. Duerden, 157
- Sea-fisheries: Report of Northumberland Committee for 1899, 354
- Sea-water, Optical Method of determining Density of, J. J. Manley, 286
- Searle (G. F. C.), Apparatus for Measuring Extension of Wires, 459
- Secular Perturbations of Venus, Prof. Eric Doolittle, 41
- Sederholm (J. J.), Archean Rocks of Finland, 373
- Seely (Prof. H. G., F.R.S.), Fossil Bird from Stonesfield Slate, 578
- Seismology: Bolletino della Società Sismologica Italiana, 23, 405, 504; Displacements in Khási and Gáo Hills during Indian Earthquake of June 1897, 206; Seismology in Japan, Prof. Omori, 282; the Transcaucasian Earthquake of December 31, 1899, 303; Earthquake-sounds, Dr. C. Davison, 329; the Roman Earthquake of July 19, 1899, Prof. Tacchini, 422; Balikesri Earthquake of September 14, 1896, Dr. G. Agamennone, 500; British Earthquakes, 1893-9, Dr. C. Davison, 546; the Latian Earthquake of July 19, 1899, Dr. A. Cancani, 573; Californian Earthquake of December 25, 1899, Prof. E. W. Claypole, 595; the Propagation of Earthquake Motion to Great Distances, R. D. Oldham, 595; the Great Japanese Earthquake of 1891, Prof. Omori, 619; Earthquake Measurement in Brick Building, Prof. Omori, 619
- Seligmann (C. G.), Account of the Seclusion of Girls at Puberty in Mabuag and other of the Western Islands of Torres Straits, and also on the Mainland at Cape York, 43; on the Club Houses and Dubus of British New Guinea, 43
- Seminase, Ém. Bourquelot and H. Herissey, 384
- Senderens (T. B.), Action of Copper on Acetylene, 360
- Serotherapy: Snake-bite Cured by Calmette's Antivenene, Major S. J. Rennie, 85; Serotherapy and Rinderpest in India, 157; Indian Antityphoid Inoculations, Prof. A. E. Wright, 327; the Indian Plague and Haffkine's Inoculations, 422; Anti-plague Inoculations, 550; Serotherapy of Anthrax, S. Arloing, 459; Immunity against Symptomatic Carbuncle, 603
- Seta, I. Bachi da, Prof. Tito Nenci, 77
- Sewage-disposal, Bacteria and, Dr. Bachhold, 63
- Sewage-disposal, the Chicago Drainage Canal, 353
- Seward (A. C., F.R.S.), on a New Genus of Palaeozoic Plants, 69; on the Jurassic Flora of Britain, 69; on the Morphology and Geological History of the Maiden-hair Tree, 69; Jurassic Plants in Manchester Museum, 358; Wealden Plants from Bernissart, 359
- Sextant-telescopes, W. E. Plummer, 54
- Shadow, Halo Round a, Howard Fox, 7
- Shadows, Butterfly, Commander D. Wilson-Barker, 128
- Shadows of Insects, Wm. Parkinson, 177
- Shand (A. B.), Thermoelectric Properties of Mercury, 286
- Sharp (David), the Cambridge Natural History, 49
- Sharp (R. Bowdler, LL.D.), a Hand-list of the Genera and Species of Birds, 126
- Shaw (P. E.), Syntony, 529; Electrical Micrometer, 529
- Shelley (G. F.), the Birds of Africa, comprising all the Species which Occur in the Ethiopian Region, 516
- Shenstone (W. A., F.R.S.), the Use of Silica in Thermometry, 540
- Sheppard (W. F.), Studies in Integrals, 459
- Shetland, the Old Red Sandstone of, 80
- Shute (Dr. D. Kerfoot), a First Book in Organic Evolution, 488
- Sibbald (Sir John), Suicide in Scotland, 531
- Sierra Leone, Report of the Malaria Expedition to, 614
- Sieveking (H.), Discharge of Statical Electricity from Points, 554
- Sigriste (G.), Apparatus for Instantaneous Photography producing Maximum Effect, 287
- Silica in Thermometry, the use of, W. A. Shenstone, F.R.S., 540
- Silk, Artificial, Joseph Cash, 156
- Silkworms: I. Bachi da Seta, Prof. Tito Nenci, 77; Formalin as a Preventive of Silkworm Disease, Prof. G. Gianoli and Dr. E. Zappa, 520
- Silurian Fish Remains, Some Recently Discovered, a Link in the Chain of Organic Evolution, R. H. Traquair, F.R.S., 306
- Silurian Rocks of Britain, the, Vol. i. Scotland, B. N. Peach, F.R.S., and J. Horne, 25
- Silver, the Metallurgy of Lead and, Henry F. Collins, 198
- "Silver Thread" Phenomenon, the, in Giggleswick Well, Dr. Broadbent, 70
- Simla, the Air Movement at, and in the Western Himalayas, 380
- Simmons (A. T.), Experimental Science (Physiography: Section I.), 77; the South-western Polytechnic, 208; Exercises in Practical Physics, 390
- Simon (L. J.), Isopyromucic Acid, 360
- Simon (S.), Ratio of Electric Charge to Mass in Kathode Particles, 190
- Simonds (F. W.), Floating Sand, 500
- Sinclair (W. F.), the Indian Forest Service, 31; Indian Corn, 445
- Singapore, Notes on the Occurrence of Amphioxus at, F. P. Bedford, 444
- Skye, Isle of, Magnetic Disturbances in, Alfred Harker, 459

- Slime Moulds, the North American, Prof. T. H. MacBride, 173
- Slocum (S. E.), the Chief Theorem of Lie's Theory of Continuous Groups, 572
- Smart (Prof. William), the Distribution of Income, Sir. R. Giffen, F.R.S., 581
- Smell, New Theory of, MM. Vaschide and Van Melle, 240
- Smell Emitted by Quartz when Rubbed, the, E. L. Garbett, 491
- Smiles (S.), Action of Alkyl Iodide on Fatty Mercuric Iodide Sulphides, 264; Attempts to Resolve into Active Constituents, Compounds containing Asymmetric Sulphur Atoms, 373
- Smith (Alexander), Laboratory Outline of General Chemistry, 27
- Smith (Charles), Euclid, Books I.-IV., 102
- Smith (E. F.), the "Wilt" Disease of Cotton, &c., 186
- Smith (Fred), the Boyhood of a Naturalist, 246
- Smith (G. B.), School Gardens, 455
- Smith (G. H. F.), New Three-circle Goniometer, 113
- Smith (H. G.), Eudismol, 47; the Essential Oil of *Darwinia fascicularis*, 483
- Smith (N.), Combination of Sulphur Dioxide with Oxygen, 434
- Smith (W. Anderson), Temperate Chile, a Progressive Spain, 536
- Smits (Dr. A.), Decrease in Tension of Solution Vapours at 0°, 72
- Smyrna, Earthquake at, 302
- Smyth (Sir Warrington W., F.R.S.), a Rudimentary Treatise on Coal and Coal Mining, 411
- Snake-bite Cured by Calmette's Antivenene, Major S. J. Rennie, 85
- Snyder (Dr. V.), Cyclical Quartic Surfaces in Space of  $n$  Dimensions, 554
- Snyder (W. H.), Physical Geography, 266
- Soap Bubbles, O. Dörge, 432
- Sodeau (W. H.), the Decomposition of Lead Chlorate, 627
- Soil, the Bacteriology of the, Thos. T. Watson, 515
- Soil, Lectures on Some of the Physical Properties of, R. W. Warrington, F.R.S., 561
- Solar Activity, the Relation between the Periodic Changes of, and the Earth's Motion, Dr. J. Halm, 445
- Solar Eclipses in the Twentieth Century, M. Camille Flammarion, 548
- Solar Eclipses, Photometric Observations of Mercury during, Dr. G. Müller, 574
- Solar Parallax, the, M. Bouquet de la Grye, 236
- Solid and Gaseous Bodies, the Absorption of the Becquerel Rays by, Hon. R. J. Strutt, 539
- Sollas (Prof. W. J., F.R.S.), New Crinoidæ, 382; Oldhamia, 382
- Solomon (M.), Damping of Galvanometer Needles, 481
- Solomon Islands, Ethnography of, R. Parkinson, 546
- Solution of the Quartic, Prof. G. B. Mathews, F.R.S., 55
- Somerville (Prof. W.), Eradication of Charlock by Spraying, 619
- Soper (George A.), the Capture of Butterflies by Birds, 491
- Souef (D. le), the Newly-born Kangaroo, 423
- Soulanges Canal, the, 40
- South African Philosophical Society, 240, 436
- South Tyrol and the Isle of Man, Similar Geological Structures in, Dr. Maria M. Gordon, 490
- Southwell (T.), the Whale Fishery for 1899, 451
- Spain: Natural Objects in Old Spanish Sculpture, Dr. E. S. Fatigati, 15; Temperate Chile, a Progressive Spain, W. Anderson Smith, Dr. Hugh Robert Mill, 536
- Specific Heat of Marble, Prof. B. O. Peirce and Robert W. Willson, 367
- Spectrum Analysis: Some Remarks on Radiation Phenomena in a Magnetic Field, Prof. Thomas Preston, F.R.S., 11; Influence of Impurities on Gaseous Spectrum, P. Lewis, 93; Spectrophotometry of Electric Light, Fernand Gaud, 95; Spectroscopic Binaries,  $\alpha$  Aurigæ, Prof. W. W. Campbell, 114;  $\alpha$  Ursæ Minoris, Prof. W. W. Campbell, 114; Prof. E. B. Frost, 114; Variations in the Spectrum of Orion Nebula, Prof. Scheiner, 114; the Methods of Inorganic Evolution, Sir Norman Lockyer, K.C.B., F.R.S., 129, 296; Spectrum of P Cygni, Herr A. Belopolsky, 137; the Piscian Stars, Sir Norman Lockyer, K.C.B., F.R.S., 213; Absorption Spectra of Solutions of Didymium and Erbium Salts, Prof. Liveing, 214; New Lines in Infra-red Spectrum of Argon, R. Nasini, F. Anderlini, and R. Salvadori, 235; Constitution of Electric Spark, G. A. Hemsalech and Prof. Schuster, 258; Spectrum of Silicon, Sir Norman Lockyer, K.C.B., F.R.S., 262; Preliminary Table of Wave-lengths of Enhanced Lines, Sir Norman Lockyer, K.C.B., F.R.S., 263; Echelon Film Gratings, Charles P. Butler, 275; Polarised Light in Magnetic Field, R. Dongier, 360; New Source of Light for Spectrometry of Precision, Ch. Fabry and A. Petro, 407; Asymmetrical Change in Spectral Lines of Iron Radiating in Magnetic Field, Dr. P. Zeeman, 408; Determination of Standard Lines in Spectrum, Maurice Hamy, 435; Constitution of Yellow Sodium Rays, Ch. Fabry and A. Perot, 483; New Mode of Using Concave Diffraction Grating, Dr. G. B. Rizzo, 501, 541; Determination of Standard Points in Spectrum, Maurice Hamy, 507; New System of Spectrum Photometry, Prof. D. B. Brace, 521; Computation of Orbits of Spectroscopic Doubles, Dr. K. Schwarzschild, 521; Rock-salt as a Refraction Standard, Prof. S. P. Langley, 545; the Wastefulness of Artificial Lights, C. G. Abbot, 546; Reflective Power of Metals, E. Hagen and H. Rubens, 555; Photographs of Aurora Spectrum, M. Paulsen, 621
- Spencer (A. C.), Devonian Strata in Colorado, 432
- Spengel (Dr. J. W.), Ueber Einige Aberrationen von Papilio machaon, 316
- Sperber (Dr. Joachim), Leitfaden für den Unterricht in der Anorganischen Chemie, 489
- Spiers (F. S.), Contact Electricity, 70
- Spinning Top, the, Lord Kelvin, 166
- Spiral Nebula, Predominance of, Prof. J. E. Keeler, 87
- Sport, Fifteen Years', and Life in the Hunting Grounds of Western America and British Columbia, W. A. Baillie-Grohman, 566
- Sprankling (C. H. G.), Sym-dipropyl, Sym-diisopropyl and as-propylisopropyl-succinic Acid, 530
- Spurr (J. E.), Geology of Aspen Mining District, Colorado, 601
- Stallo (J. B.), Death of, 279
- Standen (R.), Mollusca of Kolgnev and Franz Josef Land, 143
- Stanford (E. C. C.), Death and Obituary Notice of, 184
- Stanford's Compendium of Geography and Travel (New Issue) in Europe (Vol. i.) and the Countries of the Mainland (excluding the North-west), Geo. G. Chisholm, 368
- Stapleton (H. E.), Formation of Tetrazoline, 94; Heterocyclic Compounds, 405
- Star-fish, the Feather-stars of the Bahamas, Prof. Verrill, 16
- Star-land, Sir Robert S. Ball, F.R.S., 294
- Stark (A. C.), Death and Obituary Notice of, 155
- Stark (A. C.), the Fauna of South Africa—Birds, 516
- Stark (J.), Electrostatic Effects in Connection with Vacuum Discharges, 555; Influence of Heating on Passage of Electricity through Rarefied Gases, 572
- Starr (Prof. Frederick), Catalogue of a Collection of Objects Illustrating the Folk-lore of Mexico, 488
- Stars: on the Distribution of the Various Chemical Groups of Stars, ii., Sir Norman Lockyer, K.C.B., F.R.S., 8; New Variable Star, 17; New Algol Variable in Cygnus, 17; Light Curve of Ceraski's First Algol Variable, 355; Second New Variable in Cygnus, Madame Ceraski, 355; Ceraski's Second Algol Variable, Prof. E. C. Pickering, 454; New Variable in Cygnus, 501; Elliptic Elements of the Variable  $\gamma$  Cygni, Prof. N. C. Dunér, 574; Spectroscopic Binaries,  $\alpha$  Aurigæ, Prof. W. W. Campbell, 114;  $\alpha$  Ursæ Minoris, Prof. W. W. Campbell, 114; Prof. E. B. Frost, 114; Mercury and Jupiter as Morning Stars, 137; Central Star of Ring Nebula in Lyra, W. Strattonoff, 260; Reduction of Star Photographs, A. R. Hinks, 355; New Variable Star in Draco, Dr. T. D. Anderson, 374; a Possible Cause of the Variability of Stars, Dr. G. Johnstone Stoney, F.R.S., 443; Variable Stars of the Algol Type, H. C. Wilson, 521; Photographs of Stars, Star Clusters and Nebulae, together with Records of Results obtained in the Pursuit of Celestial Photography, Dr. Isaac Roberts, F.R.S., Dr. William J. S. Lockyer, 533; New Variable in Andromeda, Dr. T. D. Anderson, 547
- Stassano (Henri), Affinities of Vascular Endothelium, 24
- Statics and Dynamics, a First Book in, Rev. J. R. Robinson, 365
- Statistics: Statistical Methods, with Special Reference to Biological Variation, C. B. Davenport, 149; Internal Migration in England and Wales, Prof. A. W. Flux, 383
- Steam, Recent Experiences with, on Common Roads, Mr. Thornycroft, 22

Steam En  
F.R.S.  
Navigat  
Steam, S  
Grindle  
Steam: I  
loutre,  
Stebbing  
Stebbing  
Great I  
Steiger (C  
Leucite  
Stejneger  
Salama  
Stephens  
iferous  
Stereoch  
Fischer  
mit be  
Steuart (C  
Stewart (C  
Stewart (C  
Stirling (C  
South  
Stobbe (C  
Succin  
Stöber (H  
Stock (A  
Volum  
Stockhol  
ation o  
Herdr  
H. M  
Stokes (C  
Stokes (C  
Electr  
Stone (C  
Stone C  
Stones,  
Wilso  
346  
Stoney  
Show  
ability  
Atmo  
Story o  
Carbo  
Straton  
Strengtl  
Stromey  
Structu  
For. M  
Strutt  
Solid  
Student  
Lang  
Student  
Thon  
Sturtev  
Submar  
Submar  
End  
Subterr  
Drur  
Suez C  
Hart  
Suffolk  
Sugar  
H.  
Prof  
as a  
Suicide  
Suis (C  
cina  
Sulphur  
Mul  
Sulphur  
Com  
and

Steam Engine and Gas and Oil Engines, the, Prof. John Perry, F.R.S., 100; Steam Turbines, Motive Power, High Speed Navigation, Hon. C. A. Parsons, F.R.S., 424  
 Steam, Superheated, Thermodynamic Properties of, J. H. Grindley, 432  
 Steam: L'Echappement dans les Machines à Vapeur, G. Lecloutre, 563  
 Stebbing (E. P.), Indian Forest Insect-pests, 38  
 Stebbing (Rev. T. R. R.), on the Living Subterranean Fauna of Great Britain and Ireland, 116  
 Steiger (G.), Action of Ammonium Chloride on Analcite and Leucite, 432  
 Stejneger (Dr.), *Typhlomolge*, the American Gilled and Blind Salamander, 620  
 Stephens (T.), Diabasic Intrusion in Tasmanian Permo-Carboniferous Rocks, 286  
 Stereochemistry: Stereochemistry and Physiology, Prof. Emil Fischer, 140; Zur Stereochemie des fünfwertigen Stickstoffes mit besonderer Berücksichtigung des asymmetrischen Stickstoffes in der aromatischen Reihe, Edgar Wedekind, 199  
 Stuart (D. S. S.), Mineral Wealth of Zoutpansberg, 281  
 Stewart (A. M.), Handbook of Physics and Chemistry, 221  
 Stewart (Sir T. G.), Death and Obituary Notice of, 352  
 Stirling (Dr. E. C., F.R.S.), Memoirs of Royal Society of South Australia, 275  
 Stobbe (Dr. H.), Condensation Products of Benzaldehyde with Succinic Ether, 63  
 Stöber (F.), Notions de Mineralogie, 610  
 Stock (Alfred), New Method of determining Aluminium, 336; Volumetric Estimation of Boric Acid, 435  
 Stockholm International Fisheries Conference on the Exploration of the Sea, 34; E. J. Allen, 54, 227, 275; Prof. W. A. Herdman, F.R.S., 78, 177; George Murray, F.R.S., 102; H. M. Kyle, 151; Prof. Otto Pettersson, 413  
 Stokes (Sir George), Bust of, Prof. John Perry, F.R.S., 102  
 Stokes (Sir G. G., Bart., F.R.S.), the Effects of Lightning upon Electric Lamps, 343, 413, 539  
 Stone (G. H.), Glaciation of Central Idaho, 310  
 Stone Circles in Scotland, A. L. Lewis, 530  
 Stones, Floating, Dr. Erland Nordenskiöld, 278; Cecil Carus-Wilson, 318; R. C. T. Evans, 318; Prof. A. W. Brightmore, 346  
 Stoney (Dr. G. Johnstone, F.R.S.), Next Week's Leonid Shower, 28; the Leonids, 81; Possible Cause of the Variability of Stars, 443; Escape of Gases from Planetary Atmospheres, 515  
 Story of the Wanderings of Atoms, the, especially those of Carbon, M. M. Pattison-Muir, 126  
 Stratonoff (W.), Central Star of Ring Nebula in Lyra, 260  
 Strength of Materials, the, Prof. J. A. Ewing, F.R.S., 197  
 Stromeyer (C. E.), Origin of Granite, 358  
 Structure of the Inner Corona, the, Prof. S. P. Langley, For.M.R.S., 443  
 Strutt (Hon. R. J.), the Absorption of the Becquerel Rays by Solid and Gaseous Bodies, 539  
 Students' Edition of a Standard Dictionary of the English Language, James C. Fernald, 220  
 Students' Flora of New Zealand, the, and the Outlying Islands, Thomas Kirk, W. Botting Hemsley, F.R.S., 146  
 Surtevant (E.), the Birds of Rhode Island, 323  
 Submarine Boat, the, *Holland*, 135  
 Submarine Cables, the Action of Electric Tramways on Land End of, Prof. Andrew Jamieson, 595  
 Subterranean Inflow, a Canadian Lake of, Andrew T. Drummond, 128  
 Suez Canal, on the Engineering Works of the, Sir Charles Hartley, 21  
 Sutfoll (W. T.), Death of, 256  
 Sugar: Researches in the Sugar Group, H. J. H. Fenton and H. Jackson, 215; Les Sucres et leurs principaux Dérivés, Prof. L. Macquenne, Prof. R. Meldola, F.R.S., 461; Sugar as a Heat Producer in Fasting Animals, Prof. U. Mosso, 476  
 Suicide in Scotland, Sir John Sibbald, 531  
 Suis (Dr.), Atlas de Photomicrographie des Plantes Médicinales, 539  
 Sulphate of Ammonia in Agriculture, the Utility of, James Muir, 101  
 Sulphur Atoms, Attempts to Resolve into Active Constituents Compounds containing Asymmetric, S. Smiles, W. J. Pope and S. J. Peachey, 373

Sulphur, True Molecular Weight of Gaseous, O. Bleier and L. Kohn, 373  
 Sun: the Wind during Eclipses of the Sun, John W. Evans, 200; A. L. Rotch, 589; the Approaching Total Eclipse of the Sun, 201  
 Sunset Colours, Cause of Recent, Horace Darwin, 128  
 Sunshine, a Brilliant Meteor in, 306  
 Surgery: a Treatise for Students and Practitioners, Thomas Pickering Pick, 76; a Manual of Surgical Treatment, Prof. W. Watson Cheyne and F. F. Burghard, 176; Death of Sir James Paget, F.R.S., 234; Obituary Notice of, Dr. F. W. Tunnicliffe, 256; Death and Obituary Notice of Sir A. D. MacLagan, 571  
 Surveying and Geodesy, Elements of Precise, Prof. Mansfield Merriman, Sir C. W. Wilson, K.C.B., F.R.S., 77  
 Surveying, a Treatise on, R. E. Middleton and O. Chadwick, 150  
 Sussex, South-west, Geography of, Dr. H. R. Mill, 353  
 Suter (William Norwood), Handbook of Optics for Students of Ophthalmology, 149  
 Swift, Comet, Refraction Effect of (1889, I.), Prof. C. D. Perrine, 87  
 Swinton (A. A. C.), Electric Light Wires and Dust, 612  
 Switzerland and North Italy, the Teaching of Geography in, Joan Berenice Reynolds, 126  
 Swyngedauw (R.), Experimental Study of Hertz Exciter, 507  
 Sylvia in Flowerland, Linda Gardiner, 102  
 Symmetry and Asymmetry in Animals, Dr. L. Reh, 186  
 Symons (G. J.), Meteorological Extremes. II. Temperature, 22  
 Symons (Geo. James, F.R.S.), Death and Obituary Notice of, 475  
 Symons's Monthly Meteorological Magazine, 22, 238, 310, 457, 627  
 Syntony, P. E. Shaw, 529  
 System of Medicine by many Writers, edited by Prof. T. C. Allbutt, F.R.S., Dr. F. W. Tunnicliffe, 584  
 Szawasy (E.), Electrolytic Preparation of Induline Dyes, 94; Electrolysis of Nitrogen Hydrides and Hydroxylamine Amine, 335  
 Szczepanik's Photographic Process of Preparing Textile Designs, Prof. R. Beaumont, 14  
 Tacchini (Prof.), the Roman Earthquake of July 19, 1899, 422  
 Tadpoles' Tails, Experiments on Growth of, R. G. Harrison, 206  
 Tafel (J.), the Course of Electrolytic Reduction, 63  
 Tait (Prof. P. G.), Newton's Laws of Motion, 265  
 Tallberg (Dr. Tycho), Ueber das System der Nagethiera, 588  
 Tammann (G.), Relation between Electric Conductivity and Pressure, 262  
 Tammes (Miss Tiné), Pomum in Pomo, 408  
 Tanret (C. and G.), Rhamnose, 71  
 Tarry (Harold), Observations of the Leonids, 143  
 Taste, Measurement of, Ed. Toulouse and N. Vaschide, 532  
 Tatton (R. A.), the Purification of Trade Waste, 281  
 Taylor (R. L.), Action of Iodine on Alkalis, 530  
 Technical Education: Rural Education, John C. Medd, 55; Prof. R. Meldola, F.R.S., 55; C. H. Bothamley, 55; American Higher Technical Education, Prof. F. W. Burstall, 299  
 Technical Instruction in Relation to Industrial Progress, Prof. W. Ripper, 356  
 Teeth, Supernumerary, W. L. H. Duckworth and D. H. Fraser, 482  
 Telegraphy: Recent Developments of Wireless, 78; Marconi Wireless Telegraphy in U.S.A., 185; a History of Wireless Telegraphy, J. J. Fahie, 243; La Télégraphie Sans Fils, André Broca, 243; Wireless Telegraphy between Chamounix and Mont Blanc, Léon and Louis Lecarme, 280; Wireless Telegraphy in the War, 350; Wireless Telegraphy, G. Marconi, 377; Use of New Radio-conductors for, C. Tissot, 579; Syntony, P. E. Shaw, 529  
 Telephones and Lightning Discharges, A. R. Hunt, 368  
 Telephotography, Thomas R. Dallmeyer, 315  
 Telescopes: Long Focus Photographic Telescope, 41; the Great Paris Telescope, Sir Norman Lockyer, K.C.B., F.R.S., 178; Sextant-telescopes, W. E. Plummer, 54  
 Temperate Chile: a Progressive Spain, W. Anderson Smith, Dr. Hugh Robert Mill, 536  
 Temperature, Underground, J. L. C. Rae, E. F. Pittman, and Prof. T. W. E. David, 484

- Temple (Colonel R. C.), on the Thirty-seven Nats (or Spirits) of the Burmese, 44
- Tennant (Lieut.-General), a Photograph of Clouds, 14
- Test Papers, Indicators and, Alfred I. Cohn, 269
- Textile Designs, Szczepanik's Photographic Process of Preparing, Prof. R. Beaumont, 14
- Thelodus Pagei*, on, from the Old Red Sandstone of Forfarshire, and Report on the Fossil Fishes collected by the Geological Survey of Scotland in the Silurian Rocks of the South of Scotland, R. H. Traquair, F.R.S., 306
- Therapeutics: Effect of a Diet Poor in Chlorides upon the Treatment of Epilepsy by Sodium Bromide, Ch. Richet and Ed. Toulouse, 120; Action of High Tension Currents of High Frequency on Tuberculosis, E. Doumer, 459; Treatment by Zomotherapy of the Tuberculous, J. Héricourt and Ch. Richet, 459
- Thermodynamics: *Traité Élémentaire de Mécanique Chimique*, fondée sur la Thermodynamique, P. Duhem, Prof. G. H. Bryan, F.R.S., 73; the Steam Engine and Gas and Oil Engines, Prof. John Perry, F.R.S., 100; Gibbs's Thermodynamical Model, W. B. Boynton, 414
- Thermometers, Quartz, M. Dufour, 521, 531
- Thermometry, the Use of Silica in, W. A. Shenstone, F.R.S., 540
- Thoinot (Dr. L. H.), Outlines of Bacteriology, 221
- Thomas (O.), Mammals of Mount Kenya, 458
- Thomas (V.), Action of Nitric Oxide in Chromic Dichlorhydrin, 120
- Thompson (Prof. S. P.), Obliquely Crossed Cylindrical Lenses, 164; Crystallised Naphthalin and its Refractive Properties, 165
- Thomson (Geo. M.), Fertilisation of Flowers in New Zealand, 564
- Thomson (Prof. J. J.), Ionisation of Gases in Electric Field, 458
- Thon (Eduard), Justus von Liebig und Christian Friedrich Schonbein. Briefwechsel 1853-1868, 513
- Thorne (Sir Richard Thorne, K.C.B., F.R.S.), Death and Obituary Notice of, 183
- Thornton (J.), Elementary Practical Physiography, 539
- Thornycroft (Mr.), on some Recent Experiences with Steam on Common Roads, 22
- Thorpe (William), Death of, 475
- Thouvenin (M.), Effect of Longitudinal Traction in Plant-stems, 483
- Tidal Forecasts, Indian, 303
- Tides along the Antarctic Continent, R. A. Harris, 490
- Tidswell (Dr. F.), the "Emerods" of the Bible Bubonic Plague, 501
- Tiemann (Prof. Ferdinand), Death of, 84; Obituary Notice of, 133
- Tiflis, Earthquake in, 256
- Tillo (General Alexis de), Death of, 326; Obituary Notice of, 396
- Tillo (General), the Lukchun (Central Asia) Depression, 328
- Tilman (S. E.), Descriptive General Chemistry, 175
- Time, Meridian of Universal, 158
- Time Used in Ephemerides, 374
- Tin, the Velocity Change of White into Grey, Dr. Cohen, 573
- Tissot (C.), Use of New Radio-conductors for Wireless Telegraphy, 579
- Toepler (Mr.), Behaviour of Brisk Discharge in Magnetic Field, 190
- Tompkins (B.), the Theory of Water Finding by the Divining Rod: its History, Method, Utility and Practice, 1
- Torpedoes below Water, Method which has been developed at Elswick for Discharging, from the Broadside of a Ship when Steaming at a High Speed, Captain Lloyd, 21
- Torsion, Resistance of certain forms of Shafting to, and Effect of Keyways thereon, L. N. G. Filon, 93
- Torsion, Constants of Iron and Steel, Dr. Peddie, 359
- Toulouse (Ed.), Effect of Diet poor in Chlorides upon the Treatment of Epilepsy by Sodium Bromide, 120; New Method of Measuring Thermal Sensibility, 336; New Method of Measuring Acuteness of Hearing for Intensity of Sound, 436; Measurement of Taste, 532
- Townsend (J. S.), The Secondary Röntgen Rays, 95
- Trade Waste, the Purification of, R. A. Tatton, 281
- Training, Liberal, the Utility of Knowledge-making as a Means of, Prof. J. G. Macgregor, 159; G. H. Wyatt, 274
- Transactions of American Mathematical Society, 504
- Traquair (R. H., F.R.S.), on *Thelodus Pagei* from the Old Red Sandstone of Forfarshire, and Report on the Fossil Fishes collected by the Geological Survey of Scotland in the Silurian Rocks of the South of Scotland, 306
- Traumüller (Dr. F.), Geschichte der Physikalischen Experimentierkunst, 4
- Trépid (C. H.), Observations of the Leonids, 143
- Trigonometry, Elementary, A. J. Pressland and Charles Tweedie, 390
- Trillat (A.), Colouring Matter of Digitalis, 144
- Triplos, the Mathematical, 106, Prof. G. H. Bryan, F.R.S., 346
- Tropical Diseases, Liverpool School of, 342
- Tropical Medicine: Malaria and Mosquitoes, Major Ronald Ross, 522
- Tropics (Ceylon), an English Station for Botanical Research in the, John C. Willis, 32
- Trouton (Mr.), Apparatus for determining Heat required to evaporate Steam from saturated Salt Solutions, 143
- Trouton (Dr. Fred T., F.R.S.), Suggested Source of the Energy of the Becquerel Rays, 443
- Tuberculosis, Action of High-tension, High-frequency Currents on, E. Doumer, 459; Treatment by Zomotherapy, J. Héricourt and Charles Richet, 459
- Tunncliffe (Dr. F. W.), Obituary Notice of Sir James Paget, Bart., F.R.S., 256; Obituary Notice of Dr. William Marcet, F.R.S., 497; a System of Medicine by Many Writers, edited by Prof. T. C. Allbutt, F.R.S., 584
- Turbines, Steam, Motive Power, High Speed Navigation, Hon. C. A. Parsons, F.R.S., 424
- Turpain (A.), Recherches Expérimentales sur les Oscillations Électriques, 268; the Various Patterns of Wehnelt Interrupter, 407
- Tweedie (Charles), Elementary Trigonometry, 390
- Twin Refractor at Potsdam, the New, 479
- Tyndall's Ice Crystals, 590
- Types of British Animals, F. G. Aflalo, 77
- Typhlomolge*, the American Gilled and Blind Salamander, Dr. Stejneger, 620
- Tyurin (V. A.), Electro-culture, 602
- Undercurrents, Rear Admiral W. J. L. Wharton, K.C.B., F.R.S., 29
- Underground Temperature, J. L. C. Rae, E. F. Pittman and Prof. T. W. E. David, 484
- United Kingdom, Geological Survey of the, 181
- United States: Biological Lectures from the Marine Biological Laboratory, Wood's Holl, Massachusetts, 1898, 244; United States Naval Observatory, 330; Rice Culture in U.S.A., Dr. S. A. Knapp, 401; Marconi Wireless Telegraphy in U.S.A., 185
- Universal Time, Meridian of, 158
- Universities: University Intelligence, 22, 45, 69, 92, 118, 141, 164, 189, 212, 238, 261, 284, 309, 333, 357, 381, 404, 431, 456, 479, 503, 528, 554, 577, 625; the Proposed Changes in the Cambridge Mathematical Tripos, 106; Prof. G. H. Bryan, F.R.S., 346; the Indian University of Research, 260; the University of London, 369, 492; Representation of the University of London, 275; the London University Election, 299, 324; Rev. Dr. A. Irving, 318; the Position that Universities should take in regard to Investigation, 417; Hartley Botanical Laboratories of University College, Liverpool, 454
- Upheaval in Vanua Levu, Fiji, Evidence of, Dr. H. B. Guppy, 248
- Uric Acid, Recent Researches on, Prof. Emil Fischer, 187
- Urse Minoris, Spectroscopic Binary Stars, Prof. W. W. Campbell, 114; Prof. E. B. Frost, 114
- Utility of Sulphate of Ammonia in Agriculture, the, James Muir, 101
- Valentiner (H.), *Ouvres Scientifiques de L. Lorenz*, 465
- Valeur (Amand), Estimation of Halogens in Organic Compounds, 239
- Valve Motions of Engines, Prof. John Perry, F.R.S., 152
- Vanhame (W. G.), the Planarians, 15
- Vannutelli (L.), Seconda Spedizione Bottego. L'Omo. Viaggio d'Esplorazione nell'Africa Orientale, 75
- Vanua Levu, Fiji, Evidence of Upheaval in, Dr. H. B. Guppy, 248

Variable  
in Cygnus  
355; S  
355; C  
454; M  
in Dra  
443; V  
New V  
Ellipti  
574  
Variation  
Dr. H.  
Variation  
Vaschide  
Measur  
Measur  
Vector D  
Vegetabl  
Veley (V  
Rum,  
Velvrit,  
Venetia,  
Ventilati  
Venus:  
41; R  
Verneuil  
Londo  
Vernon C  
Verrill (C  
Vertebra  
Veterina  
J. A.  
Vibration  
Vieille (C  
of Co  
Project  
Vignon (C  
in Gas  
Vigourot  
Villard (C  
of El  
and R  
Ville (J.  
556  
Villiers  
Vincent  
Violuric  
Abeg  
Viscosit  
G. P  
Viticult  
Delac  
Vine,  
Vivisect  
Viziadur  
K.C.  
Voelcke  
Copp  
Volcan  
Volume  
Volunta  
Vowels  
Reco  
Vries (I  
Waage  
412  
Waage  
Waa  
Wager  
Yeas  
Wake  
Woc  
Walc  
500  
Walder  
Solv  
Walke

- Variable Stars: New Variable Star, 17; New Algol Variable in Cygnus, 17; Light Curve of Ceraski's First Algol Variable, 355; Second New Variable in Cygnus, Madame Ceraski, 355; Ceraski's Second Algol Variable, Prof. E. C. Pickering, 454; New Variable in Cygnus, 501; New Variable Star in Draco, Dr. T. D. Anderson, 374; a Possible Cause of the Variability of Stars, Dr. G. Johnstone Stoney, F.R.S., 443; Variable Stars of the Algol Type, H. C. Wilson, 521; New Variable in Andromeda, Dr. T. D. Anderson, 547; Elliptic Elements of the Variable Y Cygni, Prof. N. C. Dunér, 574
- Variation, New Data for the Study of, 316; Certain Laws of, Dr. H. M. Vernon, 577
- Variation of Latitude, Prof. Th. Albrecht, 574
- Vaschide (M.), New Theory of Smell, 240; New Method of Measuring Thermal Sensibility, 336; New Method of Measuring Acuteness of Hearing for Intensity of Sound, 436; Measurement of Taste, 532
- Vector Diagrams, Dr. C. Chree, F.R.S., 490
- Vegetable Physiology. See Botany.
- Veley (V. H. and Lilian J.), the Micro-organism of Faulty Rum, 468
- Velvrl, W. F. Reid, 59
- Venetia, Earthquake in, 450
- Ventilation, Natural and Artificial Methods of, 6
- Venus: Secular Perturbations of Venus, Prof. Eric Doolittle, 41; Rotation Period of, 574
- Verneuil (A.), New Method for Extraction of Rubber from *Landolphia* Bark, 360
- Vernon (Dr. H. M.), Certain Laws of Variation, 577
- Verrill (Prof.), the Feather-stars of the Bahamas, 16
- Vertebrates, Origin of Paired Limbs of, J. G. Kerr, 166
- Veterinary Surgery, a Surgical Operating Table for the Horse, J. A. W. Doller, 588
- Vibrations of Gun Barrels, C. Cranz, K. R. Koch, 58
- Vieille (Paul), Discontinuities Produced by Brusque Expansion of Compressed Gases, 239; Law of Aerial Resistance to Projectiles, 359
- Vignon (Léo), Rapid Method for Determining Carbonic Acid in Gaseous Mixtures, 435
- Vigouroux (E.), Molybdenum Silicide, 239
- Villard (P.), Chemical Action of Röntgen Rays, 143; Discharge of Electrified Bodies and Ozone-formation, 311; Reflection and Reaction of Kathode and Deviable Radium Rays, 604
- Ville (J.), New Compound of Antipyrin with Mercuric Chloride, 556
- Villiers (A.), Estimation of Ammonia and Nitrogen, 459
- Vincent (J. H.), Impact, 507
- Violuric Acid, Use in Calometric Investigations of, Prof. Aberg, 402
- Viscosity of Water near 4° C., Variations in Coefficient of, Dr. G. Pacher, 61
- Viticulture; a Caucasian Vine Disease, MM. Prillieux and Delacroix, 383; Physiological Phenomena of Chlorosis in Vine, Georges Curtel, 628
- Vivisection: Experiments on Animals, Stephen Paget, 512
- Viziadurg, the Eclipse Expedition at, Sir Norman Lockyer, K.C.B., F.R.S., 229, 249
- Voelcker (Dr. J. A.), the Agricultural Use of Sulphate of Copper, 281
- Volcanoes; the Etna Eruption of July 19, 1899, 185
- Volumetric Analysis, John B. Coppock, 317
- Voluntary Enlistment, Racial Aspect of, R. C. T. Evans, 200
- Vowels, the Acoustic Analysis of the, from the Phonographic Record, Prof. Louis Bevier, 467
- Vries (H. de), Law of Separation of Hybrids, 556
- Waage (P.), Untersuchungen über die Chemischen Affinitäten, 412
- Waagen (Dr. W.), Death and Obituary Notice of, 545
- Waals (J. Van der, Jun.), Entropy of Radiation, 407
- Wager (Harold), On the Phosphorus-containing Elements in Yeast, 66
- Wake (Richard), the New Education. Manual Training: Woodwork, 53
- Walcott (C. D.), Lower Cambrian Terrane in Atlantic Province, 500
- Walden (Prof.), Liquid Sulphur Dioxide as an Ionising Solvent, 114
- Walker (G. W.), Gas Distribution in Electric Field, 481
- Walker (J.), Solid Ammonium Cyanate, 119; Campholytic and Isolaunolic Acids, 505
- Walker (J. J., F.R.S.), Obituary Notice of, 618
- Wallace (Dr. Alfred R., F.R.S.), Is New Zealand a Zoological Region? 273
- Wallace (Dr. Robert), the African Horse-sickness, 235
- Wallerant (F.), a Category of Crystalline Groups Escaping Optical Investigation, 312; Non-existence of Hexagonal System, 360
- Walsh (David M. D.), the X-Ray Case Book, for Noting Apparatus, Methods and Results, 150
- War, Balloons in, 83
- War, Electricity in, Prof. John Perry, F.R.S., 541
- War. Wireless Telegraphy in the, 350
- Warburton (C.), a New Attid Spider (*Mantisatta trucidans*), 579
- Ward (H. L.), an Aerolite, 190
- Ward (Prof. H. Marshall, F.R.S.), Recent Work on *Onygena equina*, a Horn-destroying Fungus, 65; on Methods for Use in the Culture of Alge, 66; the Potency and Prepotency of Pollen, 470
- Ward (Robert De Courcy), Practical Exercises in Elementary Meteorology, 560
- Warington (Robert, F.R.S.), Lectures on Some of the Physical Properties of Soil, 561
- Warren (C. H.), New Minerals from Franklin (New Jersey, U.S.A.), 93
- Warren (Dr. W. H.), Chemistry of Perfumes, 619
- Wartegg (E. von Hesse), Cina e Giappone, 513
- Waste, Trade, the Purification of, R. A. Tatton, 281
- Water: the Theory of Water Finding by the Divining Rod: its History, Method, Utility and Practice, B. Tompkins, C. V. Boys, F.R.S., 1; Water-sterilisation by Ozone, Dr. Weyl, 65; Determination of Mass of Cubic Decimetre of Water, Dr. C. E. Guillaume, 572
- Water-gas Industry, the Carburetted, S. Cutler, Jun., 595
- Water Service Pipes, Electrical Thawing of, 156
- Waterloo and City Railway, the; Method of Construction, H. H. Dalrymple-Hay, 85; Electrical Equipment, B. M. Jenkin, 85
- Watkins (A. O.), Formation of Dendrites, 311
- Watson (Thos. J.), the Bacteriology of the Soil, 515
- Watson (W.), Experiments with Lecher's Wehnelt Interrupter, 23; a Text-book of Physics, 557
- Wave-propagation, Conditions of Solitary, R. W. Gwyther, 383
- Wear in Tunnels of Steel Rails, Thomas Andrews, F.R.S., 595
- Weasel, Colour Phases of, Mr. Barrett-Hamilton, 451
- Weather: the Effect of, on Every-day Life, Edwin Grant Dexter, 56; Compensation in Weather, Alex. B. MacDowall, 295; Drunkenness and the Weather, Prof. Edwin G. Dexter, 365; R. C. T. Evans, 469
- Webb (Sydney), the Effects of Lightning upon Electric Lamps, 343
- Wedekind (Edgar), Zur Stereochemie des fünfwertigen Stickstoffes mit besonderer Berücksichtigung des asymmetrischen Stickstoffes in der aromatischen Reihe, 199
- Wees (W. H.), Geology of Judith Mountains of Montana, 600
- Weights and Measures, International Committee of, 350
- Weinberg (Dr. Boris), State of Practical Instruction in Physics, 515
- Weiss (Prof. F. E.), a Gutta-percha Plant, 7; on a Biserial *Halonia* belonging to the Genus *Lepidophloeos*, 68
- Weiss (G.), Nature of Propagation of Nervous Impulse, 336
- Welde (Mr.), Can Ants Hear? 157
- Well, Deepest-known Natural, E. A. Martel, 192
- Wellmann (Walter), Arctic Exploration, 17
- Wessel (Herr E.), Definitive Orbit of Comet 1897 III., 374
- West (C. A.), Dissociation Constant of Azoimide, 530
- West Indian Agricultural Conference, the, Prof. J. P. d'Albuquerque, 392
- Wettstein (Dr. R. von), Grundzüge der geographisch-morphologischen Methode der Pflanzensystematik, 563
- Weyl (Dr.), Water-sterilisation by Ozone, 65
- Whale Fishery for 1899, the, T. Southwell, 451
- Whale, Rorqual, at Woolwich, 134
- Whales, the Natural History of, F. E. Beddard, F.R.S., 585
- Wharton (Rear-Admiral W. J. L., K.C.B., F.R.S.), Undercurrents, 29
- Wheat Problem, the, Sir William Crookes, F.R.S., Sir R. Giffen, K.C.B., F.R.S., 169

- Wheat, the Price of, at Haddington, 1627-1897, R. C. Mossman, 519
- Wheeler (W. H.), the Colour of Flints, 106
- Whetham (W. C. D.), Ionisation of Dilute Solutions at Freezing Point, 504
- White (A. C.), Liquid Air as Anæsthetic, 258
- Whitmell (C. T.), Planets at their Greatest Brilliancy, 540
- Who's Who, 1900, an Annual Biographical Dictionary, 270
- Wiechert (E.), Magnetic Deflection of Kathode Rays, 262
- Wiedemann's Annalen, now Annalen der Physik, 93, 190, 262, 432, 554, 626
- Wieland (G. R.), the Archelon Turtle from Fort Pierre Cretaceous Strata of South Dakota, 626
- Wiener (O.), a Fault in Lippmann's Photography, 93
- Wiglesworth (A. B.), the Birds of Celebes, 605
- Wild Beasts in the "Zoo," Bartlett's Life among, 267
- Williams (Mr.), on the Life-history and Cytology of *Halidrys siliquosa*, 65
- Williamson (R. B.), the Elements of Alternating Currents, 587
- Willis (B.), Coal-fields of Puget Sound, Washington, 600
- Willis (E. C.), the Meteors of Biela's Comet, 78
- Willis (J. C.), an English Station for Botanical Research in the Tropics (Ceylon), 32; on the Morphology and Life-history of the Indo-Ceylonese Podostemaceæ, 68
- Wills (A. P.), Molecular Susceptibility of Para-magnetic Salts of Iron Group, 432
- Willson (Robert W.), Specific Heat of Marble, 367
- Wilson (Sir C. W., K.C.B., F.R.S.), Elements of Precise Surveying and Geodesy, 77
- Wilson (H. C.), Variable Stars of the Algol Type, 521
- Wilson-Barker (Commander D.), Butterfly Shadows, 128
- "Wilt" Disease, the, of Cotton, &c., E. F. Smith, 186
- Wind during Eclipses of the Sun, John W. Evans, 200
- Wind, the Eclipse, O. L. Rotch, 589
- Wire Fences and Lightning, F. J. Brodie, 257
- Wireless Telegraphy: Recent Developments of, 78; a History of, J. J. Fahie, 243; La Télégraphie sans Fils, André Broca, 243; Wireless Telegraphy between Chamounix and Mont Blanc, Léon and Louis Lecarme, 280; Wireless Telegraphy in the War, 350; Wireless Telegraphy, G. Marconi, 377; Use of New Radio-conductors for, C. Tissot, 579
- Wires, Apparatus for Measuring Extension of, G. F. C. Searle, 459
- Witham (E.), Substituted Hydroxytriazoles, 335
- Witness of Creation, the, Nature Sketches from the Book of Job, M. Cordelia Leigh, 466
- Wood, on the Blue Colour in, Dr. Charles B. Plowright, 331, 563
- Wolff (W.), Explosions in Air, 93
- Wood (E. M. R.), the Lower Ludlow Formation and its Graptolite Fauna, 578
- Wood (J. K.), Solid Ammonium Cyanate, 119
- Wood (Prof. R. W.), on the Cause of Dark Lightning and the Clayden Effect, 104; Effects of Lightning upon Electric Lamps, 391; Photographs of Sound-waves, 433
- Wood (T. B.), Volumetric estimation of Potassium, 405
- Wood's Holl, Massachusetts, 1898, Biological Lectures from the Marine Biological Laboratory, 244
- Wooden Ball of Unknown Origin, a, Prof. H. Mohn, 31
- Woodwork: the New Education, Manual Training, Richard Wake, 53
- Work and Thought at Wood's Holl, U.S.A., 244
- Worms: the Planarians, W. G. Vanhame, 15; a Pyrenean Land Planarian, Dr. R. F. Scharff, 458
- Worsdell (W. C.), Comparative Anatomy of Encephalartos, 142
- Wright (Prof. A. E.), Indian Anti-typhoid Inoculations, 327
- Wright (H.), Diffuse Reflection of Light, 432
- Wüllner (Adolph), Lehrbuch der Experimental Physik, 221
- Wyatt (G. H.), School Science and Knowledge-making Power, 274
- X-Ray Case Book, the, for Noting Apparatus, Methods and Results, David Walsh, 150
- Yangtze Valley and Beyond, the, Mrs. J. F. Bishop, 252
- Yaraikanna Tribe of Cape York, the, Dr. A. C. Haddon, 44
- Year of Biology, a, 313
- Yeast Increase without Fermentation in presence of Limited Quantity of Air, A. Rosenstiehl, 336
- Yeast-cells, the Rate of Multiplication of, Dr. H. P. Hoyer, 113
- Yellowstone Park, Decline of Geyser Activity in, Prof. E. H. Barbour, 398
- Yermak, Account of the Trial Trip of the Great Russian Ice-breaker, Admiral Makaroff, 17
- Yorke (J. Paley), Magnetism and Electricity, 102
- Young (G.), Substituted Hydroxytriazoles, 335
- Zappa (Dr. E.), Formalin as a Preventive of Silkworm Disease, 520
- Zeeman (Dr. P.), Assymetrical Change in Spectral Lines of Iron Radiating in Magnetic Field, 408
- Zeeman, le Phénomène de, A. Cotton, 270
- Zeiss Photo-micrographic and Projection Apparatus, the, Dr. J. W. Measures, 506
- Zenneck (J.), Photography of Current Curves, 262
- Ziegler (W.), Analysis of Oscillating Discharges by means of Braun Tube, 627
- Zietz (A. H. C.), Memoirs of Royal Society of South Australia, 275
- Zittel (Prof. Karl Alfred v.), Geschichte der Geologie und Paläontologie bis Ende des 19. Jahrhunderts, 145; Text-book of Paleontology, vol. i., 608
- Zomotherapy, Treatment of the Tuberculous by, J. Héricourt and Charles Richet, 459
- Zoo-geography: Studien zur Geographie, Dr. W. Kobelt, 203; Dr. Kobelt and the Mediterranean Fauna, Prof. Henry H. Giglioli, 227
- Zoology: Zoological Gardens, Additions to, 16, 40, 61, 86, 114, 136, 157, 186, 236, 260, 283, 305, 330, 355, 374, 402, 423, 450, 453, 479, 501, 521, 547, 573, 597, 621; Zoological Society, 95, 165, 214, 335, 406, 458, 482, 555, 579; the New York Zoological Park, 111, 303; Zoologia, Prof. Achille Griffini, 175; Formalin as a Preservative, 204; the New Zealand Zoological Region, H. Farquhar, 246; Is New Zealand a Zoological Region? Dr. Alfred R. Wallace, F.R.S., 273; Prof. Alfred Newton, F.R.S., 295; Charles Headley, 589; a New Peripatus from New Zealand, Prof. Arthur Dendy, 444; Zoology of Norwegian North Atlantic Expedition, Hans Kier and Kristine Bonnevie, 258; Bartlett's Life among Wild Beasts in the "Zoo," 267; Zoology and the Australian Museums, 275; a Descriptive Catalogue of the Indian Deep-sea Fishes in the Indian Museum, 291; an Account of the Deep-sea Brachyura, being Systematic Reports upon the Materials Collected by the Royal Indian Marine Survey Ship *Investigator*, A. Alcock, 291; Zoology of Mt. Roraima, British Guiana, F. V. McConnell and J. J. Quelch, 406; the Life of James Dwight Dana, Scientific Explorer, Mineralogist, Geologist, Zoologist, Professor in Yale University, Daniel C. Gilman, Prof. John W. Judd, C.B., F.R.S., 409; the Newly-born Kangaroo, D. le Souef, 423; Notes on the Occurrence of Amphioxus at Singapore, F. P. Bedford, 444; the Land Fauna of Christmas Island, C. W. Andrews, 458; the Greenland Musk Ox, Dr. E. Lönnberg, 458; Mammals of Mount Kenya, O. Thomas, 458; a Pyrenean Land Planarian, Dr. R. F. Scharff, 458; Obituary Notice of Prof. Emile Blanchard, 473; a Complete Mosasaur's Skeleton and a Skeleton of *Diplodocus*, H. F. Osborn, 534; a Manual of Zoology, Prof. T. J. Parker and Prof. W. A. Haswell, 559; an Elementary Course of Practical Zoology, Prof. T. J. Parker and Prof. W. N. Parker, 559; Marine Zoology in Australia, Prof. W. A. Herdman, F.R.S., 590; *Typhlomolge*, the American Gilled and Blind Salamander, Dr. Stejneger, 620
- Zoutpansberg, Mineral Wealth of, Dr. S. S. Steuart, 281
- Zuber (Prof. R.), Geology of Oil-bearing Strata of Galicia, 452
- Zwilling (R.), Essais du Commerce et de l'Industrie, 176

limited

Hoyer,

E. H.

n Ice-

sease,

f Iron

, Dr.

ns of

ralia,

und

Text-

court

y H.

86,

402,

gical

New

chille

New

New

S.S.,

dley,

rthur

oedi-

Life

l the

f the

: an

ports

arine

Mt.

elch,

orer,

iver-

S.S.,

es on

ford,

ews,

458;

near

ce of

eton

nual

well,

t. J.

ry in

1954,

ger,

452